Usenet Newsgroup Archive: rec.radio.amateur.homebrew

2000-01 - 2000-05

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Date span: 2000-01-01 through 2000-05-31

Source text: rec.radio.amateur.homebrew.txt

Source item: https://archive.org/details/usenet-rec

Messages included in this PDF: 4,268

Messages are presented chronologically by archived date.

Binary or encoded payloads are not printed as blocks of encoded text; a placeholder appears where such material was detected. The original source text is unchanged.

1. Re: Fiber Optics in Ham Radio??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Alan Matheson <hokianga@ihug.co.nz>
Message-ID: <84jnjfbfp1@news.ihug.co.nz>
Source record: 64454

I am using polymer fibre optic cables with a homebrew RS232/FO converter each end to control a TenTec RX320 receiver located about 20 metres from my PC. This has almost totally eliminated interference from the PC used to control the radio. This wasn't a cheap option but there is a 20-25 db decrease in noise at frequencies in the 80 and 40 metre bands so it was well worth doing. I also plan to use a kitset audio F/O link to bring audio back to the computer soundcard for further processing. The kitset is much cheaper than the components required to build an interface.
Alan Matheson ZL2TSQ

The Martell's <mike-n-terri@erols.com> wrote in message news:386A4089.BDBDDB58@erols.com...
> Hello All.
> I am looking to find others who may be using Fiber Optics for some
> purpose in Ham Radio. I would like to use fiber rather that copper/etc
> to control and communicate with remote eq. My main interest is to find
> info on muxing audio and sending it via fiber to the remote site
> (200-300 ft from the house), any info would be appreciated.
>
> Thanks..Mike..KA1IFQ
>
>

2. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Greg Blair <gblair@sympatico.ca>
Message-ID: <386CB9CA.6E39B9F@sympatico.ca>
Source record: 64455

How about modifying a desktop computer power supply??? I have a how-to articles if you are interested.

Larry Gagnon wrote:

> I am considering building a 13.5V, 20A power supply for my rig. There
> are many designs using standard high amp transformers (which are very
> difficult and expensive to source)...but what about a switch-mode
> design? I have never seen a circuit that a hobbyist could build. Does
> anyone know of a good circuit design for a switch-mode power supply
> that is relatively straightforward to build and to source parts for?
>
> Larry MW0AWC

3. Re: LF Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Greg Blair <gblair@sympatico.ca>
Message-ID: <386CBA88.B7E7C3E5@sympatico.ca>
Source record: 64456

Talk to survey equipment manufacturers such Leitz. They have complete
differential ground station solutions. You won't have to build anything.
Just turn it on!

charlie wrote:

> I need ideas for a low power 1-2W AM transmitter that operates around
> 300Khz. A quarter wavelength
> long wire antenna is possible but there is limited power available
> (12Volt batteries). This is for short range use of
> GPS receivers that have built-in differential beacon receivers. The
> working area is hundreds of miles from civilization. I cannot find out
> anything about equipment/designs for this frequency range.

4. Circuit diagram YAESU FT-75-B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: yc6jg <yc6jg@cbn.net.id>
Message-ID: <386e7b3c.0@news.cbn.net.id>
Source record: 64457

Hello All,

I'm looking for a circuit diagram
transceiver YAESU FT-75-B

Can anyone help?

Happy Millennium 2000

Thanks,

J.Ginting (YC6JG)
Please reply to: yc6jg@cbn.net.id

5. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Nermin Bajramovi&#65533; <fortra@siol.net>
Message-ID: <Dtjb4.1723$uG.12980@news.siol.net>
Source record: 64458

Hello Greg,

Happy Millenium from Slovenia.
Could you possibly e-mail me the articles for modifications of computer
switching PS.

Regards, Nermin S58DX
fortra@siol.net
Greg Blair wrote in message <386CB9CA.6E39B9F@sympatico.ca>...
>How about modifying a desktop computer power supply??? I have a how-to
>articles if you are interested.
>
>Larry Gagnon wrote:
>
>> I am considering building a 13.5V, 20A power supply for my rig. There
>> are many designs using standard high amp transformers (which are very
>> difficult and expensive to source)...but what about a switch-mode
>> design? I have never seen a circuit that a hobbyist could build. Does
>> anyone know of a good circuit design for a switch-mode power supply
>> that is relatively straightforward to build and to source parts for?
>>
>> Larry MW0AWC
>

6. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Rocci <rocci@att.net>
Message-ID: <386E05F6.2373E730@att.net>
Source record: 64459

Greg,
I would be interested in seeing your power supply conversion articles. Can they be e-mailed?

Joe
WA3CMQ

Greg Blair wrote:

> How about modifying a desktop computer power supply??? I have a how-to
> articles if you are interested.
>
> Larry Gagnon wrote:
>
> > I am considering building a 13.5V, 20A power supply for my rig. There
> > are many designs using standard high amp transformers (which are very
> > difficult and expensive to source)...but what about a switch-mode
> > design? I have never seen a circuit that a hobbyist could build. Does
> > anyone know of a good circuit design for a switch-mode power supply
> > that is relatively straightforward to build and to source parts for?
> >
> > Larry MW0AWC

7. Re: Unblocked scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <386E3CC2.4281230@home.com>
Source record: 64460

Why not e-mail the folks who taped Gingrich's conversation?

Karl wrote:

> Anyone have brand/model on a scanner with continuous coverage
> from about 30 MHz to around 950 MHz? I guess the commond term is
> unblocked, in reference to the cellular bands. I suspect simple jumper/
> diode cut is the modification ?
>
> --
> Karl Shoemaker
> kshoe@juno.com
> http://www.dalek.org/srg

8. BC-350 Battery Charger Schematic needed...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: jimvalin@aol.com
Message-ID: <20000101102349.15107.00000657@ng-fw1.aol.com>
Source record: 64461

Subject line says it all. Anybody got one that they can copy for me?

9. Re: Heathkit weather station question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: "Alan D. Wilcox" <awilcox@suscom.net>
Message-ID: <386E3A33.3A4EB14C@suscom.net>
Source record: 64462
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

If anyone's interested, I've got the Heath Digital Weather Computer ID-4001, complete with assembly manual and the assembly manual, plus other tech info.

New in 1985, excellent condx and operational. Haven't had it out in the wx since '95.

Alan, W3DVX

10. Re: anyone build the PA0FRI 70 watt amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <187319cb.171946286@news.online.no>
Source record: 64463
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Fri, 31 Dec 1999 15:01:42 GMT, gagnon@gagnon.fakeu-net.com (Larry Gagnon) wrote:

>Has anyone ever built the PA0FRI KISS 70 watt HF amplifier as seen in
>Radcom some 5 years ago or recently reprinted in Technical Topics
>scrapbook? If so I'd like to hear from you on where you obtained your
>parts and how well the circuit works. Contact me by direct email.
>
>Larry MW0AWC
wasn't it 4x PL509 amplifier

73 jan-martin LA8AK

11. WTB HP8640A Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: w8irq@aol.com
Message-ID: <20000101132452.13176.00000338@ng-bd1.aol.com>
Source record: 64464

Would like to purchase one or a copy of one. Nick, W8IRQ

12. Re: anyone build the PA0FRI 70 watt amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <386e4c9f.2938531@news.u-net.com>
Source record: 64465
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Sat, 01 Jan 2000 17:28:06 GMT, LA8AK@online.no (J M Noeding) wrote:

>On Fri, 31 Dec 1999 15:01:42 GMT, gagnon@gagnon.fakeu-net.com (Larry
>Gagnon) wrote:
>
>>Has anyone ever built the PA0FRI KISS 70 watt HF amplifier as seen in
>>Radcom some 5 years ago or recently reprinted in Technical Topics
>>scrapbook? If so I'd like to hear from you on where you obtained your
>>parts and how well the circuit works. Contact me by direct email.
>>
>>Larry MW0AWC
>wasn't it 4x PL509 amplifier
>
>73 jan-martin LA8AK
He had two designs Jan - the 4x PL509 and the solid state with the
BLW60's...

Larry MW0AWC

13. Re: Daiwa Rotators Can Kill !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Jonesy <jonz@rmi.nospam.net>
Message-ID: <jYtb4.1567$wv4.225750@den-news1.rmi.net>
Source record: 64466
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew Andrew <g8uaq@jrw.co.uk> wrote:

Hi, Andrew

I'm certainly glad you lived to tell the story!

You fellers in 220VAC-land are a hardy bunch than us in 100VAC-land,
I suppose.

Happy New Year es 73

Jonesy W3DHJ

--
SK

p.s. Next time don't post with the root directory of your
hard drive as an attachment.

--
Marvin L. Jones jonz-AT-rmi.net W3DHJ
Gunnison, Colorado
So -- that was Y2K, huh? Big Deal!
365 days to go until the 3rd Millennium of the C.E.

14. Wanted: HBR Receiver working or not

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: tubepwr813@aol.com
Message-ID: <20000101162028.22712.00000655@ng-cb1.aol.com>
Source record: 64467

I am looking for an HBR receiver in working or non working condition.

Thanks,
Chris

15. Wandel Goltermann selective level meter - schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: C Andersson <sm6pxj@hotmail.com>
Message-ID: <gmub4.1580$yn3.2482@nntpserver.swip.net>
Source record: 64468

Need a schematic for the Wandel und Goltermann SPM-2 selective level meter.

(I use the meter as a 0,3-600 kHz LF receiver, the 650 kc IF connected to a IC-725. By accident i happened to transmit into the meter...)

Thanks
Chris
sm6pxj

16. PAGE WEB RTX ED RX USED

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: iz0ckl@libero.it
Message-ID: <386e7522.3600767@news.libero.it>
Source record: 64469

http:// www.geocities.com/iz0ckl/

17. WTB. ICOM 970H... 1200 MHZ. BAND UNIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: n6hkf@aol.com
Message-ID: <20000101173501.01496.00000498@ng-fq1.aol.com>
Source record: 64470

Hello,
I want to buy a 1296 module for the Icom IC-970H. If anyone has one they are not using and willing to part with it ,I would be interested. Does anyone know if there still available through Icom/ America ?

Tnx in advance, Happy New Year !!!!!!!

7 3 de N6HKF
Chuck

18. WTB: SSB Adapter Type CV-591A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Simon Robinson <nomis@euphony.net>
Message-ID: <84m21b$m81$1@quince.news.easynet.net>
Source record: 64471
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap,uk.radio.amateur

Does anyone have a TMC CV-591A SSB adapter looking for a good home?

I am happy to pay the going rate for a clean, original unit. Oh, a working one would be nice too!

Happy New Year to everyone.

Please reply by e-mail.

73

Simon

19. GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Chuck Calloway <clc@conninc.com>
Message-ID: <84m15002n5p@enews1.newsguy.com>
Source record: 64472

Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
what equipment would have one like TV,VCR,Sat receiver?
I opened a old C band sat. receiver up & it looks like it has one but
there are no markings & I dont have a schematic so Im wandering
where to look next? Thanks Chuck

20. want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <386EC8DF.1FA2CF6D@inreach.com>
Source record: 64473

```
want 2meter qrp txciever kit.
anyone seen this or a schematic, nothing fancy.
--
Please remove the word 'NOREPLY' from the email address, sorry for the
inconvenience, but it helps keep down the spam.
```

21. Wanted: DirectTV, Primestar dish antennas for homebrew project....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: frohro@wwc.edu
Message-ID: <frohro-0101002131420001@crux-s13.wwc>
Source record: 64474
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi,

I'm working on a 24 GHz microwave link project and would like to find some inexpensive dishes, like those used by DirectTV, and Primestar. If you have any ideas where I could come up with them, please let me know.

Thanks & 73,

Rob, KL7NA/W7

22. YAESU FR 101 RECEIVER FOR SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-01 00:00:00 UTC
From: Larry <dobby@aei.ca>
Message-ID: <84ll7s$p9c$1@news.aei.ca>
Source record: 64475

I have a very clean FR101 digital readout receiver for sale .Complete with manual Asking $200
Contact dobby@aei,ca

23. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Alan Matheson <hokianga@ihug.co.nz>
Message-ID: <84lomb$4g3$1@news.ihug.co.nz>
Source record: 64476

You may (will) end up with unwanted noise in your receiver!
Larry Gagnon <gagnon@gagnon.fakeu-net.com> wrote in message
news:386c8f4e.1495585@news.u-net.com...
> I am considering building a 13.5V, 20A power supply for my rig. There
> are many designs using standard high amp transformers (which are very
> difficult and expensive to source)...but what about a switch-mode
> design? I have never seen a circuit that a hobbyist could build. Does
> anyone know of a good circuit design for a switch-mode power supply
> that is relatively straightforward to build and to source parts for?
>
> Larry MW0AWC

24. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <386E92F9.6DA3@pop.removethistomailme.net>
Source record: 64477

```
Alan Matheson wrote:
>
> You may (will) end up with unwanted noise in your receiver!

Somebody better tell Yaesu that...

-- jm

-----------------------------------------------------
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
-----------------------------------------------------
```

25. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Jonesy <jonz@rmi.nospam.net>
Message-ID: <wmyb4.1578$wv4.235328@den-news1.rmi.net>
Source record: 64478

Chuck Calloway <clc@conninc.com> wrote:
> Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
> what equipment would have one like TV,VCR,Sat receiver?
> I opened a old C band sat. receiver up & it looks like it has one but
> there are no markings & I dont have a schematic so Im wandering
> where to look next? Thanks Chuck

Look here next: http://www.fix.net/dans.html

Even if they're not listed, they may be available if you inquire...

HTH es 73
Jonesy W3DHJ

--
SK

--
Marvin L. Jones jonz-AT-rmi.net W3DHJ
Gunnison, Colorado
So -- that was Y2K, huh? Big Deal!
365 days to go until the 3rd Millennium of the C.E.

26. Re: What do these parts do?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Art <normanmo@muohio.edu>
Message-ID: <01a8eae0$507f1dc0$901c3586@living-room>
Source record: 64479

I had exactly the same kind of
multi project breadboard at the same age - disassembled many garbage-can
radios and TVs too.

Does anyone remember Progressive-EDU-Kit? I always wondered about what it
was.

Art Norman
>
> Who else remembers starting out with these multi-project breadboard kits?
> Mine was a Heathkit, and one of my fav projects was a little
one-transistor
> oscillator that ran on the AM broadcast band and had a range of tens of
> feet. At 10, I thought it was absolutely the coolest thing!
>
> Good luck, Paul.
>
> Bob, KI8AB
>

27. Re: Wiring a Relay????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000101233730.26031.00000216@nso-bd.aol.com>
Source record: 64480

In article <19991206002502.04635.00000944@ng-fd1.aol.com>, jayedie11@aol.com (Jayedie11) writes:

>is there any specific way to wire a relay?do all relays follow the same
>wiring
>princables?i have an spdt relay that has pinout like this:

Sorry, your diagram doesn't signify much. The various fonts and readers make a mess of most drawings.

Here's how I learned to work with relays.

Relays consist of two parts - the coil or coils, and one or more contacts. Energize the coil with the right voltage, and the contacts move.

The type of relays used in almost ham gear are "neutral" relays. This means that they have only two positions: "up" or energized, and "down", or deenergized. Polarity of energy to the coil makes no difference.

There are lots of other types, but we'll just discuss neutral relays here.

Each contact on a neutral relay have up to three parts:

the "heel", which is the part that moves,
the "front", which is the part that the heel touches when the relay is "up"
the "back", which is the part that the heel touches when the relay is "down"

For example, suppose you want to use a relay to switch a coax feedline between a transmitter and a receiver, and the relay is to be "up" (energized) when transmitting. A relay with one contact that has all three parts is needed. The coax feedline is connected to the "heel", the receiver is connected to the "back", and the transmitter is connected to the "front".

73 de Jim, N2EY

28. Re: Heathkit weather station question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: viggie <jay_cee@worldnet.att.net>
Message-ID: <386EE1EC.AC5ED80D@worldnet.att.net>
Source record: 64481
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Alan

I've been looking for one for awhile. Could you describe it or send
a pic. I'm not familar with that model. Is it the led digital or LCD.
and how much do you want for it ?
John (Viggie)
N2VJE

"Alan D. Wilcox" wrote:

> If anyone's interested, I've got the Heath Digital Weather
> Computer ID-4001, complete with assembly manual and the
> assembly manual, plus other tech info.
>
> New in 1985, excellent condx and operational. Haven't had it
> out in the wx since '95.
>
> Alan, W3DVX

29. Free HP8551B/851B in Seattle area

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <386EC892.8CA@pop.removethistomailme.net>
Source record: 64482

It works great, but could probably use some new p/s filter caps and a weekend's worth of calibration.

Its CRT, BWO, mixer, and attenuator are good as new.

It is in very clean cosmetic condition, with a full set of manuals.

It weighs over 100 pounds, and is about half solid-state and half vacuum tube-based.

It consumes an entirely-unreasonable amount of electricity and bench space.

It will not be shipped anywhere, under any circumstances. You have to come and get it.

Send email explaining what it is, what you plan to do with it, and when you can come by and pick it up in Kirkland, WA.

Winner to be announced on Friday Jan 7. (Due to volume of mail received when I've offered things like this before, only the winner will receive a reply.) 73 es good luck!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

30. Re: Wanted: DirectTV, Primestar dish antennas for homebrew project....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Carl and Dee Wesser <wesser@hiwaay.net>
Message-ID: <kilb4.98545$Ym1.1636464@tw11.nn.bcandid.com>
Source record: 64483
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

HAVE EXTRA PRIME STAT DISH AND SEVERAL PRIME STAR RCVRS,,, ALSO 1 DIRECT TV DISH,, MAKE OFFER ON ONE OR ALL CARL,ALABAMA///////////////

Rob Frohne wrote in message ...
>Hi,
>
>I'm working on a 24 GHz microwave link project and would like to find some
>inexpensive dishes, like those used by DirectTV, and Primestar. If you
>have any ideas where I could come up with them, please let me know.
>
>Thanks & 73,
>
>Rob, KL7NA/W7

31. Re: Wanted: DirectTV, Primestar dish antennas for homebrew project....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Carl and Dee Wesser <wesser@hiwaay.net>
Message-ID: <WpIb4.98700$Ym1.1638867@tw11.nn.bcandid.com>
Source record: 64484
Cross-posted to: rec.radio.swap,rec.radio.amateur.antenna,rec.radio.amateur.homebrew

HAVE EXTRA PRIME STAT DISH AND SEVERAL PRIME STAR RCVRS,,, ALSO 1 DIRECT TV DISH,, MAKE OFFER ON ONE OR ALL CARL,ALABAMA///////////////

Rob Frohne wrote in message ...
>Hi,
>
>I'm working on a 24 GHz microwave link project and would like to find some
>inexpensive dishes, like those used by DirectTV, and Primestar. If you
>have any ideas where I could come up with them, please let me know.
>
>Thanks & 73,
>
>Rob, KL7NA/W7

32. Motorola Maxtrac ID

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Lionel <lbooth@ametro.net>
Message-ID: <84nqdj$7cn$1@news.datasync.com>
Source record: 64485
Cross-posted to: alt.ham-radio.vhf-uhf,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Trying to identify. I have 3 of these and the only info on them that
appears meaningful is:

Model # FuF1848A
On the rx(?) circuit board 84D80949T01
On the tx(?) circuit board 84D80199M01
On the Eprom FRN4008A, V1.0 Mod B7

The front panel has a 2 digit channel LED
It has indicator lights (Tx/Bsy, Call, Scan)
It has pushbuttons (System, Subfleet, Phone, Scan, Select)

The front panel is labeled: MaxTrac 800

Barcoded on the chassis side is: HUF3037A.

The unit was made in Israel.

Can anyone give me technical info on the unit? It has got to be good for
something, right????

33. Re: Wandel Goltermann selective level meter - schematic needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <386f5849.75673344@news.online.no>
Source record: 64486

On Sat, 1 Jan 2000 22:35:17 +0100, "C Andersson" <sm6pxj@hotmail.com>
wrote:

>Need a schematic for the Wandel und Goltermann SPM-2 selective level meter.
>
>(I use the meter as a 0,3-600 kHz LF receiver, the 650 kc IF connected to a
>IC-725.
have never heard about it, sure it isn't SPM-3 (0-612kHz)? It is many
circuit diagrams, have some books available, could bring it with me
next time I go to Sweden. Plan a visit to SM6HYG and SM6ESG, but don't
know when..

>By accident i happened to transmit into the meter...)
>
that's what happen when one insist it is never a problem, must take
simple precautions against it, it is a good advice to have separate RX
and TX connections at a point. I operate my HF-transceiver with many
other signals than the tx antenna.

73 Jan-Martin

34. Re: New stuff for our newsgroup

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <386F9D24.94846971@inreach.com>
Source record: 64487

whatever this crap was, it was removed from its server.

b.k.Hoover@unet.com wrote:
>
> I found this great homepage with lots of new stuff:
>
> http://everybody.isfunky.com
>
> Have fun!!!

--
Please remove the word 'NOREPLY' from the email address, sorry for the
inconvenience, but it helps keep down the spam.

35. Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Carel Mulder - PA0CMU <cmulder@casema.net>
Message-ID: <386FCC10.C5757776@casema.net>
Source record: 64488
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

Hi groups,

I am searching for a copy from Wes Hayward's (W7ZOI) article:

"Designing and Building Simple Crystal Filters," by Wes Hayward, QST,
July 1987, P 24"

Can anyone help me?

72, Carel PA0CMU.

36. Re: Synchronous detector!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: Tim <ka8ddz@worldnet.att.net>
Message-ID: <386FE00F.E462ABC7@worldnet.att.net>
Source record: 64489

A BC Engineer friend of mine has a sync detector kit you might be
interested in.

www.qsl.net/wd8das

I have no interest in his company other than a possible free lunch at
Dayton this year.

Tim ka8ddz

jos wrote:

> Does anyone know of an Integrated Circuit # for AM detection like the
> ones used in
> short wave receivers . Thanks.

37. Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <386FEE56.2A0FF7A2@NO-SPAMtcainternet.com>
Source record: 64490
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Greetings,

I'm about to begin building my first HF amplifier. By the time it's complete I should have a license class that grants the ability to use the thing. (still waiting on a callsign from a test I took over 2 weeks ago)

I'm going to start with either 813s or 4-400s (I have several of each). I've seen amplifiers in both grid-driven and cathode-driven configurations. I realize that cathode driven amps are easier to build and tune but also realize that the drive requirements of a grid-driven amp are much less.

I'm interested in the opinions of those with much more experience in this area and extend my sincere gratitude for the thoughts and opinions to those who respond.

73's

NOTE: To reply directly to me, please remove NO-SPAM from my email address. Sor
ry for any inconvenience but due to the HORRENDOUS amount of SPAM received as a
result of posting to these newsgroups, I find no other easy solution.
--
Randall D DuCharme
Programmer - Plant Systems Group
Tyson Foods, Inc.
Phone: 501-290-3662
Fax: 501-290-7980

38. Re: Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: n0za <n0zaNOn0SPAM@gj.net.invalid>
Message-ID: <218c6f60.3e928e57@usw-ex0108-061.remarq.com>
Source record: 64491
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Finding low powered exciters is somewhat of a problem.
Almost all transceivers are of the 100 watt range. For a
grid driven amplifier probably 5 watts or so is about right.
Grid driven amplifiers require rather substantion bias
supplies. I think the point to ponder for a while is why
no commercial manufacturer makes anything but the zero bias
grounded grid type, and this has been the case for about 30
years. I suggest some reading in Bill Orr's Radio Handbook.
73, Ross

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

39. Re: Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@tcainternet.com>
Message-ID: <38701AF7.1D4051FE@tcainternet.com>
Source record: 64492

N4MXF wrote:
>
> Randall;
> Just one opinion here but over 40 years of experience. A pair of 813's make a
> nice little kw amp.

Thanks for your thoughts. I have only a few schematics using 813s and I
think all of them are grid driven. I have some using the popular 3CXxxx
and 4CXxxx tubes but I understand these tubes are pretty grid-touchy and
I don't really want to start out with a tube like that. Maybe after a
few years of experience.... ;-)

Please send me anything that you can without going to too much trouble.
I'd be most grateful indeed!

Thanks again

--
Randall D DuCharme
Programmer - Plant Systems Group
Tyson Foods, Inc.
Phone: 501-290-3662
Fax: 501-290-7980

40. Re: Ten-Tec 1253 Regen Kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-02 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <84nrva$pl5$1@news1.exit109.com>
Source record: 64493

It is here

http://www.exit109.com/~singhpk/circuits/tuberegen.gif

Udo Peters wrote in message <84f461$e57$1@news07.btx.dtag.de>...
>Hi abcd1234,
>
>> I built the 1253 regen 3 yrs back.
>> 1. its regen/reaction control is not smooth.
>> 2.It is susceptible to audio oscillations.
>> 3.much better performance ca be obtained even from fet transistor
circuits
>> Ibuilt one using a fet at 1.5 volts, and this was veryvery good.
>>
>> I would honestly recommened that you build one using tubes
>> like 12sn7/12au7/6u8 at low voltages (12-50) volts on plate.
>> Even the the12sn7 @24 volts on plate beats even a superhet
>> rx and has very smooth regen.
>>
>> Use a throttle cap for regen and please use a 12-012 volt/,45 amp
>> transformer primary as the choke load for detector.
>>
>>
>> Ican post ckt if you need it.
>
>I'm also very much interested in the circuit as I intend to build a regen
>with tubes. Could you post it to me?
>
>VY 73s and best Y2K de
>
>Udo dk3bi@t-online.de
>
>
>

41. Re: Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: n4mxf@aol.com
Message-ID: <20000102221737.02793.00000832@ng-fd1.aol.com>
Source record: 64494

Randall;
Just one opinion here but over 40 years of experience. A pair of 813's make a nice little kw amp. There are many parts, articles, and advice available cheap. I would not advise going directly to multi-grid tubes in a grid driven amp unless you have alot of experience. Hence, do yourself a big favor and make the 813 as a grounded grid--ie cathode driven animal. By the way, a pair of 813's above 15 meters start to be a little touchy because of the high inter-electrode capacitance.
If you need schematics for same, I have several and there some in the older ARRL Handbooks and the older ARRL SSB Handbook. I would be glad to send you copies if you do not have access to the books mentioned. Hard to beat a cheap ole 2X813 amp. 73 Bill (k6EC)

42. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: w9sz@prairienet.org
Message-ID: <QkVb4.229$aU5.26@firefly>
Source record: 64495

Check out http://www.downeastmicrowave.com and http://www.shfmicro.com.

Both are excellent sources of various GaAsFET's. I've always been hesitant to use devices from C-band LNA's as they could be damaged in the process, plus I often don't know what the devices are and don't have spec sheets.

Steve at Down East Microwave always includes the manufacturer's spec sheets at no charge with devices he sells - a very nice little "extra" to his customers.

73, Zack W9SZ

Jonesy (jonz@rmi.nospam.net) wrote:
: Chuck Calloway <clc@conninc.com> wrote:
: > Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
: > what equipment would have one like TV,VCR,Sat receiver?
: > I opened a old C band sat. receiver up & it looks like it has one but
: > there are no markings & I dont have a schematic so Im wandering
: > where to look next? Thanks Chuck
:
: Look here next: http://www.fix.net/dans.html
:
: Even if they're not listed, they may be available if you inquire...
:
: HTH es 73
: Jonesy W3DHJ
:

43. Re: 136kHz operation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: magne@radar.no
Message-ID: <6GYb4.8243$sH.41716@news1.online.no>
Source record: 64496

In article <3a3d6625.48041459@news.online.no>, LA8AK@Online.NO wrote:
>is some particular frequencies I can listen to, and when is most
>activity on this band?

It seems to me like early morning, approx. 0700 UTC, saturday and sundays
is your best chance. Check the signal of DCF39 (center freq 139.0kHz,
ASCII 200 baud, 340 Hz shift) to get an indication of band condition.
Measurements I've seen, seems to indicate that the strongest
amateur stations (at the same distance) might be some 40dB
weaker than DCF39 (maybe more).

Still haven't heard a thing up in JP53 :-(
--Magne / la1bfa

44. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Vincent <vincent.habchi@art.alcatel.fr>
Message-ID: <38706E80.25B2BAC@art.alcatel.fr>
Source record: 64497

Chuck Calloway dixit :

> Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
> what equipment would have one like TV,VCR,Sat receiver?

Building a 6 m preamp with a GaAsFET is a waste of material. Not only it is almost impossible to correctly match a GaAsFET for Gamma Opt at low frequency (and there is no GaAsFET I know for which you will find s or noise parameters at 50 MHz), but you have also to face the flicker noise of these devices, which can be significant up to 100 MHz, with the consequencies that a simple FET like the J 310 can be much less noisy at 50 MHz than a PHEMT. As we say here in French : ï¿½ The best can be the ennemy of the good ï¿½.

So, just pick up a $.50 part at your local store and enjoy !

Vincent, F5RCS

--
Vulnerant omnes, necat ultima.
La sï¿½mantique gï¿½nï¿½rale en Europe : http://www.esgs.org

45. Re: want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <84qcca$8m4$1@nnrp1.deja.com>
Source record: 64498

In article <386EC8DF.1FA2CF6D@inreach.com>,
whagen@inreach.com wrote:
> want 2meter qrp txciever kit.
> anyone seen this or a schematic, nothing fancy.

No such animal. Look in your QST indexes for articles by
KK7B, or check out the kits at Kanga US which will provide
the building blocks to roll your own.
--
Laura Halliday VA3LDH "Que les nuages soient notre pied
Grid: FN03gs a terre..." - Hospital/Shafte
Satellite: VA3SFL on AO-16, UO-22, KO-23, KO-25

Sent via Deja.com http://www.deja.com/
Before you buy.

46. HP Spectrum Analyzer cables

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Roland Cordesses <cordesse@opgc.univ-bpclermont.fr>
Message-ID: <38709ACF.2C8B6DD1@opgc.univ-bpclermont.fr>
Source record: 64499

Hi there

In order to do ajustements on the IF section of my HP141T spectrum
analyzer, I am looking for the following cables :

- HP 11592-60015 extension assembly
- HP 11592-60016 IF to RF extension cable

Does anybody have these cables?

73's and Happy New year

Roland Cordesses / F2DC

47. CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: CU2IJ <rdd87728@mail.telepac.pt>
Message-ID: <84pv3g$rv9$1@pthp35.telecom.pt>
Source record: 64500

Hello,

I am looking for a CW QRP transceiver KIT. It should be sensitive, have about 4 to 5W output, easy to build and tune and have vfo covering the CW band. Of course price is also a item of interest.

My questions:
What rig should I chose ?
Wich band (30m or 20m) to have better results?
Should I go for a ready-to-go such as MFJ QRP CW Transeiver?

Thank you for your help

Luis Pacheco

48. Heathkit HW-101 60Hz noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <KM1c4.4321$b5.716121@news.itd.umich.edu>
Source record: 64501
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur

HI Group!

I was checking out my HW-101 over the holidays and I have noticed some odd things.

I was loading up the xmtr using an indoor antenna and a tuner. I had a receiver located in another part of the house. When I keyed the mic, I heard my voice in the other room, but it was
full of 60 Hz noises.

I am using a 50K Yaesu microphone that I wired to the 4 pin connector. My voice is readable.

Since the rig is older than my oldest child, I wonder if the power supply filter caps are dying.
Any replacement parts out there?

Anyone have a similar experience, but found it not to be the PS??

Curtis Scholl
cscholl@izzy.net
KG8SU

49. Re: What do these parts do?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: sansimian <sansimian@home.com>
Message-ID: <C3926CEB382EDD63.DFE70F7358C27A29.48A0E92560BA584B@lp.airnews.net>
Source record: 64502

hehe... this brings back memories... I still have a couple of the Radio Shack kits like you describe, and from time to time hook up an am reciever or fm xmitter for fun.. My kids are getting to the age and have enough interest in my hobby to start using them as well, maybe I can get another generation of HAMs on the air! Anyhow... Happy new year to everyone!!!
Shawn
KD6OJI

Robert Lyons <boblyons@umich.edu> wrote in message
news:386A4E0D.66DFC8C4@umich.edu...
> Paul wrote:
> >
> > I have no knowledge in radio or any other electronics, although I am
> > intersted by this sort of stuff.
>
> Hi, Paul -
>
> Please accept my apology for the jerks that responded to you. I've yet
> to find a newsgroup that didn't have some.
>
> You got some pretty good answers that may get you started. One gentleman
> suggested the Forrest Mims books from Radio Shack, which I agree are fine
> for exploring basic circuits. However, when I started out, I needed some
> even more basic info, and my recollection is that the Mims books don't
> help with *really* basic stuff. In my case, what worked was to get one
> of those "100-in-one Electronic Projects" type of kits. The ones I'm
> thinking about have an assortment of electronic components and some kind
> of 'breadboarding' arrangement (a way to temporarily connect them in lots
> of ways). The manual gives directions on making all sorts of things, like
> simple transmitters, amplifiers, buzzers and "shadow detectors". Start
> with the simple circuits and try to figure out how they work, and you'll
> learn fast. Feel free to email me with questions.
>
> Who else remembers starting out with these multi-project breadboard kits?
> Mine was a Heathkit, and one of my fav projects was a little
one-transistor
> oscillator that ran on the AM broadcast band and had a range of tens of
> feet. At 10, I thought it was absolutely the coolest thing!
>
> Good luck, Paul.
>
> Bob, KI8AB

50. Re: What do these parts do?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: sansimian <sansimian@home.com>
Message-ID: <E34F5A5AB3F041C4.02B54A16BAFAA58B.065C679DEF14131F@lp.airnews.net>
Source record: 64503

Yup, you sure did Jonesy... You are the first idiot to post.
You win the grand prize of being labeled as such.
Paul has the same questions I did early in my electronic journey, and asking such questions is not stupid. How many questions did you yourself ask when you got started? Did the person who answered them think they were stupid questions? Or, by some miraculous turn of events, were you born with all of the understanding of electronics it takes the rest of us years to learn?
Just because you think that Pauls questions are stupid or ignorant does not give you the right to flame him as you did, it was unfair and unjust of you to do so. If the people I had asked questions of while I was learning were as mean as you, then I would not be where I am today.
The only stupid question is the question that goes unasked.
Shawn
KD6OJI

Jonesy <jonesy@rmi.nospam.net> wrote in message
news:FIf94.790$wv4.72092@den-news1.rmi.net...
> Well, this one wins the prize!
>
> Here I was waiting for the first idiot to post
>
> "I just got a Yacomwood TRX-99000 for Christmas
> and I need someone to tell me how to turn it on!"
>
> -- and then this shows up.
>
> Troll or not -- this one has to be better than what I was expecting!
>
> Jonesy

51. Re: Heathkit HW-101 60Hz noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Cap'n Crunch <kcfamily@tir.com>
Message-ID: <946918641.655369@rochesterEDGE>
Source record: 64504
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur

Curtis Scholl wrote in message ...
>Since the rig is older than my oldest child, I wonder if the power supply
>filter caps are dying.
>Any replacement parts out there?

>Anyone have a similar experience, but found it not to be the PS??

Well maybe not a similar experience, but I've replaces many power supply filter caps in old AM receivers that caused the same problem in the audio.

I found it very difficult to replace the old 4 or 3-in-one caps with original type replacements (in some cases, very expensive). In most cases I just hooked up several caps of the stated capacitance is the identical way or made up strange value caps by combining modern caps(parallel or series)... worked fine on most rigs, but I did notice on some that PLACEMENT of the caps and lead length can also be a factor doing it this way.

52. Ferrite Beads

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: j1aguiar@aol.com
Message-ID: <20000103124334.09222.00000068@ng-fs1.aol.com>
Source record: 64505

Has anyone had a problem with RF getting into a weather station using a wind speed and direction indicator.
The main problem is in the wind speed indicator, being ofcourse a meter to measure voltage, bouncing up during key down on CW.
Any change to the internal circuit will put the wind speed out of calibration and I was wondering if anyone has had any luck with ferrite beads at the input leads.If so what number "mix" of beads are used. I tried several ferrite approaches by wrapping several turns around a ferrite stick, non of which worked . Jim

53. Re: 136kHz operation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: C Andersson <sm6pxj@hotmail.com>
Message-ID: <kK5c4.2671$yn3.5519@nntpserver.swip.net>
Source record: 64506

>Still haven't heard a thing up in JP53 :-(
>--Magne / la1bfa

I'm often qrv weekdays around 21.30 UTC.

/Christer
sm6pxj

54. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: "J.M. Coelers" <j.coelers@chello.nl>
Message-ID: <84qp4lsnv1@weber.a2000.nl>
Source record: 64507
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

Ja ik kan je helpen
Ik heb het QST nummer wat je nodig hebt.

doe maar een suggestie

73 Hans PA0AAJ

Carel Mulder - PA0CMU <cmulder@casema.net> schreef in berichtnieuws
386FCC10.C5757776@casema.net...
> Hi groups,
>
> I am searching for a copy from Wes Hayward's (W7ZOI) article:
>
> "Designing and Building Simple Crystal Filters," by Wes Hayward, QST,
> July 1987, P 24"
>
> Can anyone help me?
>
> 72, Carel PA0CMU.

55. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: JC Quinn <kc4ee@sonet.net>
Message-ID: <9B8c4.650$6PM5.9306497@news5.usenetserver.com>
Source record: 64508

How about Ten Tec? They have QRP Xcievers for 20, 30,40 & 80 meters....3
watts out. See
http://www.tentec.com for details. Price is $95 US.
73
Jim
"CU2IJ" <rdd87728@mail.telepac.pt> wrote in message
news:84pv3g$rv9$1@pthp35.telecom.pt...
> Hello,
>
> I am looking for a CW QRP transceiver KIT. It should be sensitive, have
> about 4 to 5W output, easy to build and tune and have vfo covering the CW
> band. Of course price is also a item of interest.
>
> My questions:
> What rig should I chose ?
> Wich band (30m or 20m) to have better results?
> Should I go for a ready-to-go such as MFJ QRP CW Transeiver?
>
> Thank you for your help
>
> Luis Pacheco
>
>

56. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: phil <phil@invest.fsbusiness.co.uk>
Message-ID: <e7I5c8AW9Oc4Ew5r@invest.fsbusiness.co.uk>
Source record: 64509

Nick,

>>Somebody better tell Yaesu that...

>>
>
>I run an EMC test house and can vouch for the fact that it is VERY difficult to
>suppress a switcher to co-exist with a receiver.
>
>It would be possible thought to build a small analogue PSU to run the rig on
>receive with a switcher to take over on Tx.
>
>It would have to be synchronised with the PTT and start up almost instantly but
>that would not be impossible.
I refer you to John's answer above.

Somebody also better tell Icom that.

Geoff, Icom UK's service engineer uses one of their switchers as his
bench PSU.

Undetectable noise when sitting next to ANY receiver or transceiver to
date and has yet to fail.

Phil G4ZOW

57. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: nielsen@primenet.com
Message-ID: <slrn871snb.mon.nielsen@bob.localnet>
Source record: 64510

See the following:

http://www.redhotradio.com
http://www.smallwonderlabs.com

These both offer small high-performance kits with built-in keyers,
frequency readout (in morse) and full break-in.

Bob, W6SWE

On Mon, 3 Jan 2000 10:53:43 -0000, CU2IJ wrote:
>Hello,
>
>I am looking for a CW QRP transceiver KIT. It should be sensitive, have
>about 4 to 5W output, easy to build and tune and have vfo covering the CW
>band. Of course price is also a item of interest.
>
>My questions:
>What rig should I chose ?
>Wich band (30m or 20m) to have better results?
>Should I go for a ready-to-go such as MFJ QRP CW Transeiver?
>
>Thank you for your help
>
>Luis Pacheco
>
>

--
Bob Nielsen, W6SWE (RN2) nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 http://www.primenet.com/~nielsen

58. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: "Al Lorona, Jr." <al_lorona@agilent.com>
Message-ID: <3870FB5B.1F86@agilent.com>
Source record: 64511

CU2IJ wrote:
>
> Hello,
>
> I am looking for a CW QRP transceiver KIT. It should be sensitive, have
> about 4 to 5W output, easy to build and tune and have vfo covering the CW
> band. Of course price is also a item of interest.
>
> My questions:
> What rig should I chose ?
> Wich band (30m or 20m) to have better results?
> Should I go for a ready-to-go such as MFJ QRP CW Transeiver?
>
> Thank you for your help
>
> Luis Pacheco

Hi, Luis,

Are you an ARRL member? There is a table of QRP kits in the Members Only section of http://www.arrl.org compiled by Bruce Muscolino, W6TOY/3, with specs, prices and web sites of about ten different kit manufacturers. It may help you come to a decision.

R,

Al W6LX

--

While you're passing out the spam, don't forget these guys:

admin@loopback
$LOGIN@localhost
$LOGNAME@localhost
$USER@localhost
$USER@$HOST
root@mailloop.com
Chairman William Kennard: wkennard@fcc.gov
Commissioner Susan Ness: sness@fcc.gov
Commissioner Harold Furchtgott-Roth: hfurchtg@fcc.gov
Commissioner Michael Powell: mpowell@fcc.gov
Commissioner Gloria Tristani: gtristan@fcc.gov
US Postal Service: customer@email.usps.gov
Fraud Watch: fraudinfo@psinet.com
Federal Trade Commission: consumerline@ftc.gov

59. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Henk <clawes@hetnet.nl>
Message-ID: <38710661.5687485F@hetnet.nl>
Source record: 64512
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

VERON bibliotheek!

Carel Mulder - PA0CMU schreef:
>
> Hi groups,
>
> I am searching for a copy from Wes Hayward's (W7ZOI) article:
>
> "Designing and Building Simple Crystal Filters," by Wes Hayward, QST,
> July 1987, P 24"
>
> Can anyone help me?
>
> 72, Carel PA0CMU.

60. hybrid for TX 144/430

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: asena@bigfoot.com
Message-ID: <38710f4e.3241453@news.telepac.pt>
Source record: 64513

I am looking for small hybrid modules of TX for 144MHz or 430MHz.
Anyone can point me in the right direction ??
Thanks!!

Ant&#65533;nio S&#65533;rgio Sena
asena@bigfoot.com

61. Re: want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3870cf5b.171705573@news.online.no>
Source record: 64514

On Mon, 03 Jan 2000 14:40:13 GMT, marsgal42@hotmail.com wrote:

>In article <386EC8DF.1FA2CF6D@inreach.com>,
> whagen@inreach.com wrote:
>> want 2meter qrp txciever kit.
>> anyone seen this or a schematic, nothing fancy.
>
>No such animal. Look in your QST indexes for articles by
>KK7B, or check out the kits at Kanga US which will provide
>the building blocks to roll your own.
>--
by the way, what special is a 2m "QRP transceiver"

62. FS Eimac 4CX250R Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: w8irq@aol.com
Message-ID: <20000103165541.12605.00000101@ng-bh1.aol.com>
Source record: 64515

I have two new factory sealed tubes, also have the 606 sockets and chimneys.
Open to offers. Nick, W8IRQ

63. Variable xtal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387118fa.190555971@news.online.no>
Source record: 64516

S53MV designed a different version of SM5BSZ type variable bandwidth xtal filter. Had a look at some late issues of VHF communications but cannot find it.
Could somebody scan the circuit and pass it to me? I need only the principles. Also MwEc xtal filter circuit mentioned in Radcom 1/2000 is wanted

73 jan-martin LA8AK

64. Re: Ramsey Raid

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: sansimian <sansimian@home.com>
Message-ID: <2DDBB4788CA2C8F6.CC48BDAB95709A85.5B6A65B7992A8B7B@lp.airnews.net>
Source record: 64517

In the RS 2000 catalog... page 219, lower right corner, item # 28-4030, is functionaly identical to the kits sold by Ramsey. Therefore, if the kits sold by Ramsey are illegal, why not the kits from Radio Shack???

IMHO, the US customs is way off course here.

While I was in the millitary, I was in communications and cryptography, I have seen a LOT of other devices much more capable, have longer range, ect than either the kits sold by either Ramsey OR Radio Shack. The simple transmitters sold by both have very limited range. To be useful, they would need power amplification. and if an organisation had the person or persons capable of building the power amplifier, then the same persons would be capable of building the initial transmitter.
This kit sold by RS as well does not comply with the Federal Regs if built by a hobbyist. Read the regs... Also, the question of weather or not the kits, when assembled, comply with the regs is also a non issue.
And the commercial applications, such as they might be are not the issue.

The issue is that the US Customs officials raided a US bussiness for the alleged sales of devices to persons unknown for the purpose of aiding unnamed illegal activities.

If there was a person or organisation who decided to use the devices in question for illegal purposes, would it not be prudent to arrest them and prevent the illegal activities, rather than abuse and harrass the source of the items, a legitimate bussiness?
Say for instance, a guy goes into a Wal Mart, buys a ski mask, goes to the bank down the road, puts the ski mask on, and robs the bank. Is that Wal-mart's fault? Would the clerk or manager on duty need to worry about the FBI coming in and arresting them for the sale of the ski mask to a bank robber for the purposes of conceling his identity, then force Wal-Mart as a whole to discontinue the sale of ski masks? I dont think so...
Just remember the McDonalds hullaboo... Somebody spills coffee in their lap, sues the restraunt for their accident. McDonalds, had to pay... because the product they sold was misused by the person, causing the person a (hate to say this cause I dont believe it is true) injury. It wasnt that the employees of McDonalds spilled the coffee on the customer, but the customer spilling the coffee on herself. Common sense would tell you that COFFEE IS HOT!!! DUH!!!
So, why should Ramsey be held accountable for actions of a very few customers who may have engaged in illegal activities using the products sold by Ramsey?
The whole thing is ridiculous.
Shawn
KD6OJI

>Bob Lewis <aa4pb@erols.com> wrote in message
news:848pnm$aq9$1@bob.news.rcn.net...
> What kind of illegal transmitters does Radio Shack sell? I don't see
> any in my catalog. Some of the Ramsey kits do not meet federal
> requirements and they do get used by people who do not know they are
> illegal - sometimes in commercial applications.

65. Re: Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <38712B53.97C9C391@rsg.org>
Source record: 64518
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Randall,

Feel free to use the Triode Amplifier Program (TAP 2.0) for
Grounded Grid Cath Drive Triodes available free from my site
at;

http://www.mbn.net/kd9jq/hamradio

Good Luck on the Amp

Chuck KD9JQ

"Randall D. DuCharme" wrote:
>
> Greetings,
>
> I'm about to begin building my first HF amplifier. By the time it's
> complete I should have a license class that grants the ability to use
> the thing. (still waiting on a callsign from a test I took over 2 weeks
> ago)
>
> I'm going to start with either 813s or 4-400s (I have several of each
>). I've seen amplifiers in both grid-driven and cathode-driven
> configurations. I realize that cathode driven amps are easier to build
> and tune but also realize that the drive requirements of a grid-driven
> amp are much less.
>
> I'm interested in the opinions of those with much more experience in
> this area and extend my sincere gratitude for the thoughts and opinions
> to those who respond.
>
> 73's
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email
> address. Sor
> ry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a
> result of posting to these newsgroups, I find no other easy solution.
> --
> Randall D DuCharme
> Programmer - Plant Systems Group
> Tyson Foods, Inc.
> Phone: 501-290-3662
> Fax: 501-290-7980

66. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <38712C10.8E28BFD7@rsg.org>
Source record: 64519

Actually it is easy to design low noise optimized 6 Meter Preamps
using GaAsFETs. I've built many from HF thru 432.

Try out my free Preamp Design Program (ASP 4.0) available at
http://www.mbn.net/kd9jq/hamradio

73 Chuck KD9JQ

Vincent wrote:
>
> Chuck Calloway dixit :
>
> > Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
> > what equipment would have one like TV,VCR,Sat receiver?
>
> Building a 6 m preamp with a GaAsFET is a waste of material. Not only it is
> almost impossible to correctly match a GaAsFET for Gamma Opt at low frequency
> (and there is no GaAsFET I know for which you will find s or noise parameters at
> 50 MHz), but you have also to face the flicker noise of these devices, which can
> be significant up to 100 MHz, with the consequencies that a simple FET like the
> J 310 can be much less noisy at 50 MHz than a PHEMT. As we say here in French :
> ï¿½ The best can be the ennemy of the good ï¿½.
>
> So, just pick up a $.50 part at your local store and enjoy !
>
> Vincent, F5RCS
>
> --
> Vulnerant omnes, necat ultima.
> La sï¿½mantique gï¿½nï¿½rale en Europe : http://www.esgs.org

67. Low cost 80/40/20m CW QRP transceivers [SM6DJH]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3871229d.193022721@news.online.no>
Source record: 64520

In SM-QTC nr 12/99 and possibly nr 1/00 SM6DJH describes a rather
interesting high performance single band CW transceiver with ladder
type 5MHz xtal filter.
He underline the importance of using readily available components, the
transistor types have been available for almost 40 years and may still
be available in one or another version for many years to come, such it
is not possible to say about integrated circuits.
Semiconductors are BF199, BD135 (or BD137, BD139), BC547B (TUN) BF245B
and BC557B (TUP). The receiver even has AGC, some of it is on another
IF =1MHz using a 6MHz ceramic element in the oscillator. Only few
coils in RX and TX must be wound, in large extent is used fixed value
coils with values like 0�33, 1�H, 2�2, 10�H etc, it is therefore
easier to tune it up without too much complications.

RF output is 5W on 80m, 4W on 40m and 1.7 on 20m but using BFW16A or
2N4427 as driver stage the output may be increased to 3.2W

no email address is mentioned, only phone number

73 Jan-Martin LA8AK

68. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38712703.194149679@news.online.no>
Source record: 64521

On Mon, 03 Jan 2000 10:40:16 +0100, Vincent
<vincent.habchi@art.alcatel.fr> wrote:

>Chuck Calloway dixit :
>
>> Im wanting to build a 6 meter preamp & need a GaAsfet.Does any one know
>> what equipment would have one like TV,VCR,Sat receiver?
>
>
>Building a 6 m preamp with a GaAsFET is a waste of material. Not only it is
>almost impossible to correctly match a GaAsFET for Gamma Opt at low frequency
>(and there is no GaAsFET I know for which you will find s or noise parameters at
>50 MHz), but you have also to face the flicker noise of these devices, which can
>be significant up to 100 MHz, with the consequencies that a simple FET like the
>J 310 can be much less noisy at 50 MHz than a PHEMT. As we say here in French :
>« The best can be the ennemy of the good ».
>
>So, just pick up a $.50 part at your local store and enjoy !
>
>Vincent, F5RCS
>
you may be right, have heard same talk from qualified persons for the
last 10 years or more, but the appliance operators requires it!

Jan-Martin LA8AK

69. Help Please (FET)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Tony <ei5em@esatclear.ie>
Message-ID: <84ra86$2ir$1@fraggle.esatclear.ie>
Source record: 64522

I need data incl pinouts of dual gate FET 3SK51. I need this to complete an RF 30 metre fromt-end preamplifier. Many thanks.

de Tony EI5EM

ei5em@esatclear.ie

70. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38712666.193991891@news.online.no>
Source record: 64523
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

On Mon, 03 Jan 2000 21:28:17 +0100, Henk <clawes@hetnet.nl> wrote:

>VERON bibliotheek!
>
>Carel Mulder - PA0CMU schreef:
>>
>> Hi groups,
>>
>> I am searching for a copy from Wes Hayward's (W7ZOI) article:
>>
>> "Designing and Building Simple Crystal Filters," by Wes Hayward, QST,
>> July 1987, P 24"
>>
>> Can anyone help me?
>>
>> 72, Carel PA0CMU.

how can I contact VERON Bibliotheek for copies of articles in back
issues of Electron?

Who is now writing the column for PA0KSB?

73 Jan-Martin

71. HELP! 900 mhz to link 2 repeaters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: JJ <jjsmith@NOSPAMtcainternet.com>
Message-ID: <s72d0fqv5k2181@corp.supernews.com>
Source record: 64524

I am wanting to use a 900 MHz link to link together 2 repeaters!!! Can someone tell me where I need to start? I would consider something in the ghz range if it would be better for clarity.

Thanks,
JJ

72. Balun Ratio ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Stephen Strock <sstrock@dreamscape.com>
Message-ID: <s72dbknc5k2177@corp.supernews.com>
Source record: 64525

Question.....

If a rig wants to see 50 ohms and the ladder line is 450 ohms then why do you use a 4:1 balun??????

I am feeding a multiband dipole and using a tuner I don't really have any problems (except I can't load up on 160m).... My theory in antenna work is not the best and I am trying to learn as much as possible.

Thank You in Advance

Stephen

--
Stephen P. Strock - WA2FDU
sstrock@dreamscape.com

73. Re: want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0301002005100001@dialup-190.hip.cam.org>
Source record: 64526

In article <3870cf5b.171705573@news.online.no>, LA8AK@Online.NO wrote:

> On Mon, 03 Jan 2000 14:40:13 GMT, marsgal42@hotmail.com wrote:
>
> >In article <386EC8DF.1FA2CF6D@inreach.com>,
> > whagen@inreach.com wrote:
> >> want 2meter qrp txciever kit.
> >> anyone seen this or a schematic, nothing fancy.
> >
> >No such animal. Look in your QST indexes for articles by
> >KK7B, or check out the kits at Kanga US which will provide
> >the building blocks to roll your own.
> >--
> by the way, what special is a 2m "QRP transceiver"

I was wondering the same thing. I'm still trying to figure out whether the original poster is looking for FM or CW/SSB capabilities.

It often seems like QRP is used to mean simple equipment. And when you see the term applied to VHF equipment, where low power seems more common than high power, the term doesn't quite make sense. By the time you have a receiver and a signal in one of the VHF bands, not only is it fairly complicated, but going to higher power doesn't add all that much complication.

You can have bare-bones VHF equipment, but to be just fairly capable it's going to be more complicated than bare-bones HF equipment.

Michael VE2BVW

74. Re: want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <3871543A.2B3D2EF9@inreach.com>
Source record: 64527

sorry for the ambiguity, I am looking for cw qrp txciever, a couple fo
watts at best, interested in setting up local network with the new tech
licenses, since they wont get hf priveledges without general class
licenses.
Looking for cw txcievers similar to pixie, peanut, michigan mighty mite,
etc, but with both rx and tx, simple etc,
thanks,
kc6ufe

Michael Black wrote:
>
> In article <3870cf5b.171705573@news.online.no>, LA8AK@Online.NO wrote:
>
> > On Mon, 03 Jan 2000 14:40:13 GMT, marsgal42@hotmail.com wrote:
> >
> > >In article <386EC8DF.1FA2CF6D@inreach.com>,
> > > whagen@inreach.com wrote:
> > >> want 2meter qrp txciever kit.
> > >> anyone seen this or a schematic, nothing fancy.
> > >
> > >No such animal. Look in your QST indexes for articles by
> > >KK7B, or check out the kits at Kanga US which will provide
> > >the building blocks to roll your own.
> > >--
> > by the way, what special is a 2m "QRP transceiver"
>
> I was wondering the same thing. I'm still trying to figure out whether
> the original poster is looking for FM or CW/SSB capabilities.
>
> It often seems like QRP is used to mean simple equipment. And when
> you see the term applied to VHF equipment, where low power seems
> more common than high power, the term doesn't quite make sense. By
> the time you have a receiver and a signal in one of the VHF bands,
> not only is it fairly complicated, but going to higher power doesn't
> add all that much complication.
>
> You can have bare-bones VHF equipment, but to be just fairly capable
> it's going to be more complicated than bare-bones HF equipment.
>
> Michael VE2BVW

75. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <387155B6.6F13@pop.removethistomailme.net>
Source record: 64528

maddog@io.com wrote:
>
> On Mon, 3 Jan 2000 18:49:58 +0000, phil <phil@invest.fsbusiness.co.uk>
> wrote:
>
> >Somebody also better tell Icom that.
> >
> >Geoff, Icom UK's service engineer uses one of their switchers as his
> >bench PSU.
> >
> >Undetectable noise when sitting next to ANY receiver or transceiver to
> >date and has yet to fail.
>
> OK, granted... so what's their secret, or are we all just supposed to
> marvel at ICOM for the rest of our lives?
>
> 73,
> monty N5FC

Shielding, bypassing, inductive decoupling, more shielding, and then,
after all that, some more shielding, decoupling, and bypassing.

Wes Hayward has some good notes on shielding principles on his site at
http://www.teleport.com/~w7zoi/satutor.html. He talks about it in the
context of providing good isolation between modules in a homebrew
spectrum analyzer, but everything he points out is equally valid in the
switching-supply business.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

76. FA KLM KT 34A TRIBANDER

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: NI4L <ni4l@bellsouth.net>
Message-ID: <38716F79.7D3EC85A@bellsouth.net>
Source record: 64529

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=228843147

77. Re: hybrid for TX 144/430

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Bob Headrick <bobh@proaxis.com>
Message-ID: <s72u4mpp5k27@corp.supernews.com>
Source record: 64530

Robert <DC6XS> Eckelmann <robert.eckelmann@netsurf.de> wrote in message
news:38712AA6.C7E38368@netsurf.de...
>
> Have a look at www.mitshubishi.com
> for 430MHz FM i can propose the M55714 (max 7Watts@50Ohms with max
> 0.2Watt Input)

Try http://www.mitsubishi.com/

- 73 Bob W7OV

78. Needed plate choke

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <gifc4.2809$475.73780@news4.giganews.com>
Source record: 64531
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I have a Heath HW-101 with a burned out choke in the plate circuit of the final amplifier. The diagram rates it at 425 microhenries.

Does anyone have something that would work in this spot? The old part mounts with #6 threaded holes in the ends of the ceramic form and is about 2.5 inches long and a half inch in diameter. Of course I am willing to try to fit in something else. Wire size has to be enough to handle around a quarter of an Ampere direct current I estimate.

If I can't find this part I may have to rewind the old one.

73, Bob K6DDX

79. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <3871847A.57FFA86D@rsg.org>
Source record: 64532
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

There's also the May 1982 (Pg 21) QST Article
by Wes Hayward titled;

"A Unified Approach to the Design of Crystal Ladder Filters"

which is 7 pages long. I used it as a guideline in building
some 6 Xtal 13.101Mhz Ladder Filters with nice results.

73 Chuck KD9JQ
http://www.mbn.net/kd9jq/hamradio

Carel Mulder - PA0CMU wrote:
>
> Hi groups,
>
> I am searching for a copy from Wes Hayward's (W7ZOI) article:
>
> "Designing and Building Simple Crystal Filters," by Wes Hayward, QST,
> July 1987, P 24"
>
> Can anyone help me?
>
> 72, Carel PA0CMU.

80. Re: Daiwa Rotators Can Kill !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-03 00:00:00 UTC
From: Hamish Moffatt <hamish@rising.com.au>
Message-ID: <84p7l7$3nb$1@arachne.labyrinth.net.au>
Source record: 64533
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew Andrew <g8uaq@jrw.co.uk> wrote:
> from the equipment left me feeling somewhat shaken. Further =
> investigation revealed no fault with the amplifier, but the rotator =
> controller had a dead short between the case metalwork and the mains =
> live connection, even when turned off !!

It sounds like an earth leakage detector (or safety switch) would
be a good investment at your QTH! They detect current in the earth
wiring and if any is detected, they trip and disconnect the active wire.
This assumes that the metal case of your rotator controller is earthed
(3 pin mains connector).

Hamish VK3SB
--
Hamish Moffatt Mobile: +61 412 011 176 hamish@rising.com.au
Rising Software Australia Pty. Ltd. http://www.risingsoftware.com/
Phone: +61 3 9894 4788 Fax: +61 3 9894 3362 USA: 1 888 667 7839

81. Coupled microstrip formulae ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Vincent <vincent.habchi@art.alcatel.fr>
Message-ID: <3871D125.4347B52F@art.alcatel.fr>
Source record: 64394

Hi again,

has anybody out here formulae for computing even and odd mode impedances of coupled microstrip lines in the general case ?

The PUFF software I intended to use is a bit limited, in the sense that it can design only equal width strips, whereas for an interdigital filter I need to vary the widths and spacings.

Thanks
Vince, F5RCS

--
Vulnerant omnes, necat ultima.
La sï¿½mantique gï¿½nï¿½rale en Europe : http://www.esgs.org

82. Re: Balun Ratio ?????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <3871CC9D.287806FD@cmcorp.com>
Source record: 64395

Stephen Strock wrote:

> Question.....
>
> If a rig wants to see 50 ohms and the ladder line is 450 ohms then why do
> you use a 4:1 balun??????

You have not said what is on the other end of the ladder line!
(Impedance wise.)

The transmission line only reflects the load to the transmitter.

In an ideal system (And there are FEW!) the antenna impedance would be 450
ohms,
the line would then be matched by a 9:1 balun to 50 ohms.
But, the antenna is probably NOT 450 ohms over the whole band or even not at
all.

> I am feeding a multiband dipole and using a tuner I don't really have any
> problems (except I can't load up on 160m).... My theory in antenna work
> is not the best and I am trying to learn as much as possible.

You see, the dipole is presenting the 450 ohm line with about 75 ohms.
(Gross oversimplification...)
and because you have not said what length (wavelengths) the transmission line
is
it could be a LOT of different impedances at the transmitter end.

> Thank You in Advance
>
> Stephen
>
> --
> Stephen P. Strock - WA2FDU
> sstrock@dreamscape.com

--
Thomas C. Sefranek WA1RHP
ARRL Instructor, Technical Specialist, VE Contact.
http://www.harvardrepeater.org
http://hamradio.cmcorp.com/inventory/Inventory.html

83. **Swap HF-225 with options**

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <84sone$9ac$2@news7.svr.pol.co.uk>
Source record: 64396

Hello Everyone,

I have a Lowe HF-225 with options fitted as below and would like
to swap with a good portable or mobile dual bander. Or even an
older HF rig please.

D-225 FM detector/ AM sync board.
W-225 Antenna pre-amp and telescopic whip antenna.
K-225 Remote data entry keypad.
B-225 Internal NiCad battery pack.

Complete with power supply and handbook, all in mint condition.

Please reply direct to john@mm1dsp.freeserve.co.uk

Many thanks and a happy new year to everyone.
Regards,
John.

84. HP606B signal generator disaster

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "Peter E. Orban" <Peter.Orban@nrc.ca>
Message-ID: <3871F25E.7924B148@nrc.ca>
Source record: 64397
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.equipment

Happy New Year to everyone!

One of the bands on my HP606B signal generator quit. Upon disassembly I found that one of the a coils on the amplifier turret assembly came loose, it got maimed, shorted, and eventually burned. It is the H coil, for the 1.76MHz - 6MHz band. The short question is, does anyone have a replacement coil by chance?

Interestingly, the generator was still working, except the output level could not be increased, and the signal was a bit distorted. That was when I took it apart. The above coil was a mess, but I could still count the turns. The circuit is a push-pull circuit, from the oscillator to the endstage, and the coil is part of the tuned plate tank circuit of the final amplifier. The coil assembly is fully symetrical, it had the secondary, the level control and output windings in the middle, and the main winding split, on both sides, wound in the zig-zag manner. The coil also has two slugs. First I rewound the coil as a one layer bifilar winding for the tuned part of the coil. I put it on a Q-meter, it was a reasonable coil, except I calculated it had about 70pF self capacitance (it needs to have less than 20pF or so, calculating from the circuit diagram). The coil I made was 2 x 24 turns, about 15mm in length, on the about 10mm diameter ceramic carrier, from 0.25mm enameled wire. Next I rewound it as two simple windings next to each other. It still has about 40pF self capacitance. I will make another try, with spacing between the turns. Interestingly, the oscillator coil for the same band is a one layer winding, and it uses a similar variable cap for tuning. The difference is that the ceramic form is about 20mm in diameter. If this does not work, then I guess I would have to find my misplaced zig-zag winding machine, or make another machine :-(
There is a resistor on the secondary winding that loads the coil, that also got burned a bit. It measured now about 700 Ohm. The manual gives a starting value of 100 Ohm, with a note that it is to be adjusted as required. I have some ideas, but unfortunately there are no notes in the manual on how to select the value.
Anyone by chance intimately familiar with this generator?

Thanks for your help, Peter
--
Peter E. Orban
National Research Council of Canada
e-mail: peter.orban@nrc.ca

85. Re: Help Please (FET)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <38721813.CF0605BB@concentric.net>
Source record: 64398

```
According to my ECG cross reference:
(Crosses to ECG454)
Dual Gate MOSFET, N-channel, UHF/VHF Amp, Noise Figure 7 dB at 900 Mhz Gate
Protected
transconductance 15,000 umhos
Gate-Source Cutoff Voltage 4
Zero-Gate Voltage Drain Current, mA 6-30 (min-max) IDSS
Gate-Source Breakdown Voltage 25
Max device dissipation 360 milliwatts

g2
D g1
<tab> S----------(case)

(bottom view)

Hope this helps.
Jim W5AOX

Tony wrote:

> I need data incl pinouts of dual gate FET 3SK51. I need this to complete an
> RF 30 metre fromt-end preamplifier. Many thanks.
>
> de Tony EI5EM
>
> ei5em@esatclear.ie
```

86. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: CU2IJ <rdd87728@mail.telepac.pt>
Message-ID: <84sgc2bvt1@pthp35.telecom.pt>
Source record: 64399

Hi, Al,

I am not a member yet, although I am planing to come (QST is too expensive here).

Thank you for your help,

Luis Pacheco
CU2IJ

87. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "Carel Mulder (PA0CMU)" <cmulder@casema.net>
Message-ID: <3872221E.BC153EAB@casema.net>
Source record: 64400
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

Hi groups,

Thanks all for replying. I already have copies of the article now.

Hints and tips for building crystal ladder filters are welcome.

72 Carel, PA0CMU.

88. Re: Ferrite Beads

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: j1aguiar@aol.com
Message-ID: <20000104122330.29773.00000394@ng-cb1.aol.com>
Source record: 64401

>Subject: Re: Ferrite Beads
>From: "Will Sparks" willy@home.com
>Date: Tue, 04 January 2000 12:47 AM EST
>Message-id: <84s1hs$lhq@chronicle.concentric.net>
>
>Depending on what frequency the interfereing RF is, the ferrite may not work
>very well. At higher frequencies, above a few hundred MHz, the ferrite beads
>start to lose it's attenuation. You may have to put in a low-pass filter
>near the meter. I'm assuming the speed indicator voltage is DC or near it.
>Maybe a series of capacitors shunted to ground will help?
>
>Just thinking out loud...
>
>Will
>
>
>"J1aguiar" <j1aguiar@aol.com> wrote in message
>news:20000103124334.09222.00000068@ng-fs1.aol.com...
>> Has anyone had a problem with RF getting into a weather station using a
>wind
>> speed and direction indicator.
>> The main problem is in the wind speed indicator, being ofcourse a meter to
>> measure voltage, bouncing up during key down on CW.
>> Any change to the internal circuit will put the wind speed out of
>calibration
>> and I was wondering if anyone has had any luck with ferrite beads at the
>input
>> leads.If so what number "mix" of beads are used. I tried several ferrite
>> approaches by wrapping several turns around a ferrite stick, non of which
>> worked . Jim
>
>
Hi Will, actually its on 14 mhz. As for the voltage that drives the wind speed indicator, its an AC voltage. The problem is nothing more than RF saturation as the wind speed indicators are mounted on the tower and the leads do run in along with the coax and rotor cables. These problems are some times difficult to solve and relocation of the weather station devices are often the solution. Through the years I have solved countless RF problems, non of which has ever required using ferrite beads. Jim

89. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <3870cfa2.5491757@news.u-net.com>
Source record: 64402

On Mon, 3 Jan 2000 10:53:43 -0000, "CU2IJ" <rdd87728@mail.telepac.pt>
wrote:

>Hello,
>
>I am looking for a CW QRP transceiver KIT.

I would recommend the Wilderness Sierra QRP CW transceiver. I built it last year and it is terrific. Great fun to build, good instructions, easy to tune up. You have many options available and plug-in band modules for every band. You can buy just one and keep your costs down. The transceiver is very sensitive, great receiver, incredibly good break-in CW, very light and best of all it only consumes 35mA on receive. About 2.0-3.5 watts output, depending on input voltage and the way you wind the toroids. There is a digital readout, memory keyer and digital wattmeter module option that makes it a very high tech QRP rig!

check out the website <http://www.fix.net/jparker/wild.html>

Larry MW0AWC

90. Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: brokebob@aol.com
Message-ID: <20000104162917.19122.00000422@ng-cu1.aol.com>
Source record: 64403

I would appreciate someone looking up the filament currents for a 12A6 and 12SN7 Pease e-mail currents direct to

brokebob@aol.com

Thanks

91. PMR Radio Board at http://www.egroups.com/group/pmr_mods/

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "colinlowe@jet" <colinlowe@jet.es>
Message-ID: <84tq74fne1@lola.ctv.es>
Source record: 64404
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,uk.radio.amateur

http://www.egroups.com/group/pmr_mods/

92. Re: HELP! 900 mhz to link 2 repeaters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <38728152.31DA@mad.scientist.com>
Source record: 64405

JJ wrote:
>
> I am wanting to use a 900 MHz link to link together 2 repeaters!!!
> Can someone tell me where I need to start? I would consider something
> in the ghz range if it would be better for clarity.
>
> Thanks,
> JJ

really won't matter what band you use as far as clarity goes,
just get 2 'repeaters' on 900mHz.
1 with regular split and the other with an upside down split.
put 1 on each controller at each site and setup the controller to use
the box as a link port.
this assumes that the controller is capable of doing this.
i'm a little spoiled. i have an ff-800 controller.
plenty of rx/tx ports and config space.

--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

93. Re: Ferrite Beads

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <387286D0.B42B7AE@eznec.com>
Source record: 64406

You can get quite a bit more attenuation from a ferrite toroid than from a rod, because of the lack of a big air gap in the magnetic path. You'll get the most attenuation at 14 MHz from 70-series ferrites (using Fair/Rite-Amidon type designations), with a close second being type 43. Other high-permeability, low-frequency ferrites like Magnetics type J are fine also. All these maintain their impedance well into the VHF range. I'd wrap each cord going into the weather station, including the mains power cord, through a toroid core of one of these materials, using about ten turns, close to the weather station. You may also have to do some bypassing, but most of the energy will be common-mode, which the ferrite cores will greatly reduce.

If there are any electronic devices such as diodes at the sensor end of the line, you may have to give that end the same treatment. Otherwise, RF can be rectified by the devices and sent down to your weather station as ordinary DC along the normal signal path.

The impedance of the ferrite types I mentioned increases more-or-less linearly up to a few MHz, above which the attenuation is fairly constant with frequency for at least a couple of decades.

Roy Lewallen, W7EL

J1aguiar wrote:
>
> >Subject: Re: Ferrite Beads
> >From: "Will Sparks" willy@home.com
> >Date: Tue, 04 January 2000 12:47 AM EST
> >Message-id: <84s1hs$lhq@chronicle.concentric.net>
> >
> >Depending on what frequency the interfereing RF is, the ferrite may not work
> >very well. At higher frequencies, above a few hundred MHz, the ferrite beads
> >start to lose it's attenuation. You may have to put in a low-pass filter
> >near the meter. I'm assuming the speed indicator voltage is DC or near it.
> >Maybe a series of capacitors shunted to ground will help?
> >
> >Just thinking out loud...
> >
> >Will
> >
> >
> >"J1aguiar" <j1aguiar@aol.com> wrote in message
> >news:20000103124334.09222.00000068@ng-fs1.aol.com...
> >> Has anyone had a problem with RF getting into a weather station using a
> >wind

> >> speed and direction indicator.
> >> The main problem is in the wind speed indicator, being ofcourse a meter to
> >> measure voltage, bouncing up during key down on CW.
> >> Any change to the internal circuit will put the wind speed out of
> >calibration
> >> and I was wondering if anyone has had any luck with ferrite beads at the
> >input
> >> leads.If so what number "mix" of beads are used. I tried several ferrite
> >> approaches by wrapping several turns around a ferrite stick, non of which
> >> worked . Jim
> >
> >
> Hi Will, actually its on 14 mhz. As for the voltage that drives the wind speed
> indicator, its an AC voltage. The problem is nothing more than RF saturation as
> the wind speed indicators are mounted on the tower and the leads do run in
> along with the coax and rotor cables. These problems are some times difficult
> to solve and relocation of the weather station devices are often the solution.
> Through the years I have solved countless RF problems, non of which has ever
> required using ferrite beads. Jim

94. Rx Multicoupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Lionel <lbooth@ametro.net>
Message-ID: <84udg6ehl1@news.datasync.com>
Source record: 64407

I need a schematic to build a rx multicoupler to feed 3 or 4 hf rx's. Any references to published literature would be great.

95. Re: hybrid for TX 144/430

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "Robert <DC6XS> Eckelmann" <robert.eckelmann@netsurf.de>
Message-ID: <38712AA6.C7E38368@netsurf.de>
Source record: 64534

Hi!
> I am looking for small hybrid modules of TX for 144MHz or 430MHz.
> Anyone can point me in the right direction ??

Have a look at www.mitshubishi.com
for 430MHz FM i can propose the M55714 (max 7Watts@50Ohms with max
0.2Watt Input)

73 de Rob

96. Re: Heathkit HW-101 60Hz noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000103205235.00945.00000210@ng-fq1.aol.com>
Source record: 64535

Curt, using another rec in the house is not a good way to check your rig for hum..if you overload your monitor rec you can create a lot of extra noises.if you can get someone a mile or so away to listen to your sig you might get a different report.also disconnect your mic or put rig on cw and check it for noise.sounds like you need to make some more tests before you start looking for filter caps.. good luck W4PQW

97. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: maddog@io.com
Message-ID: <38715449.75790964@news.io.com>
Source record: 64536

On Mon, 3 Jan 2000 18:49:58 +0000, phil <phil@invest.fsbusiness.co.uk>
wrote:

>Somebody also better tell Icom that.
>
>Geoff, Icom UK's service engineer uses one of their switchers as his
>bench PSU.
>
>Undetectable noise when sitting next to ANY receiver or transceiver to
>date and has yet to fail.

OK, granted... so what's their secret, or are we all just supposed to
marvel at ICOM for the rest of our lives?

73,
monty N5FC

98. Re: YAESU FR 101 RECEIVER FOR SALE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: moody1951@aol.com
Message-ID: <20000103223341.01073.00000279@ng-fq1.aol.com>
Source record: 64537

Interested in your FR 101. Do you have a picture you could send to me?

Thanks

Reg

99. Need Schematic for Pride 100 Linear Power Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Lorna & Tim Mize <timlornamize@mciworld.com>
Message-ID: <387185B4.848EF62F@mciworld.com>
Source record: 64538

I am in need of the schematic for the Pride 100 Bi-Linear Power Amp.
Of course I will compensate for any costs involved. Please email me at
tmize57@juno.com
Thanks for your time!
Tim N7XAU

100. Schematic on pc

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Super Sport <rerickso@eidnet.org>
Message-ID: <MWec4.14382$j%2.1028@cabot.ops.attcanada.net>
Source record: 64539

Where can one find a shareware type of a program that will let me draw a schematic on my computer . Rick

101. Re: Ferrite Beads

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Will Sparks <willy@home.com>
Message-ID: <84s1hs$lhq@chronicle.concentric.net>
Source record: 64540

Depending on what frequency the interfereing RF is, the ferrite may not work very well. At higher frequencies, above a few hundred MHz, the ferrite beads start to lose it's attenuation. You may have to put in a low-pass filter near the meter. I'm assuming the speed indicator voltage is DC or near it. Maybe a series of capacitors shunted to ground will help?

Just thinking out loud...

Will

"J1aguiar" <j1aguiar@aol.com> wrote in message news:20000103124334.09222.00000068@ng-fs1.aol.com...
> Has anyone had a problem with RF getting into a weather station using a wind
> speed and direction indicator.
> The main problem is in the wind speed indicator, being ofcourse a meter to
> measure voltage, bouncing up during key down on CW.
> Any change to the internal circuit will put the wind speed out of calibration
> and I was wondering if anyone has had any luck with ferrite beads at the input
> leads.If so what number "mix" of beads are used. I tried several ferrite
> approaches by wrapping several turns around a ferrite stick, non of which
> worked . Jim

102. Re: Schematic on pc

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: "Robert <DC6XS> Eckelmann" <robert.eckelmann@netsurf.de>
Message-ID: <3871B2F4.E4FCF1CE@netsurf.de>
Source record: 64541

Hello!

> Where can one find a shareware type of a program that will let me
> draw a schematic on my computer . Rick
Try www.cadsoft.com they have the famous eagle as freeware for private
users, it is limited to one DIN-A4-page of shematic and a half EUROCARD
of PCB

Rob

103. Re: GaAsfet sourse from surplus equip.?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: Vincent <vincent.habchi@art.alcatel.fr>
Message-ID: <3871CE87.13F0D1A2@art.alcatel.fr>
Source record: 64542

Charles Reichert scripsit :

> Actually it is easy to design low noise optimized 6 Meter Preamps
> using GaAsFETs. I've built many from HF thru 432.
> Try out my free Preamp Design Program (ASP 4.0) available at
> http://www.mbn.net/kd9jq/hamradio

Great, I will ! Thank you for giving away for free these kinds of very valuable software.

Yet, the 3SK... part you seem to use sounds is a dual-gate (GaAs) FET. In this case, you are right, those devices are low-noise from HF to VHF (I know about the very classical european CF 300). But they can't be used beyond 1 GHz, which is precisely where the ï¿½ true ï¿½ GaAsFET (three ports) takes over.

Devices like ATF21186, MGF1302, ATF35086, ATF13056, etc. are not suitable for use under 500 MHz.
Anyway, 500 MHz is already BF... try an op-amp !)))

Cheers,
Vincent

--
Vulnerant omnes, necat ultima.
La sï¿½mantique gï¿½nï¿½rale en Europe : http://www.esgs.org

104. HFradio.org and Prefix Lookups, QSLing, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-04 00:00:00 UTC
From: nw7us@hfradio.removethispart.org
Message-ID: <Zzkc4.3302$V2.33201@sea-read.news.verio.net>
Source record: 64543
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello,

I recently added a PREFIX look-up form on the QSL page. If you need to know where a prefix is from, simply enter the call or prefix and see what country it is assigned to.

You are invited to http://hfradio.org, a non-commercial site offering:

+ Azimuth Map / Equidistant Map Creation (choose any QTH as center, many options)

+ Propagational Resources (live, real-time reports, eAlert service (sign up for automatic email solar/geo reports, complete with Aurora index))

+ News, and DX information and reports

+ QSL Manager and Callsign Lookup center

+ Swap and Shop

+ FREE HOME PAGES THAT YOU CAN USE TO POST YOUR OWN HAM OR SWL SITE

+ Bookstore - SWL and Ham related books. Over a 1000 titles so far.

+ Plus more (Directories, etc.)

73!

--

: World-Wide Communications via Amateur Radio : 122.93W : 47.67N :
: 10x56526 : CW/SSB - DX hunter : Brinnon, WA : Code Warrior #60 :
: visit http://hfradio.org/ :

105. IN NEED OF A SK 510 SOCKET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: ts950sdx@aol.com
Message-ID: <20000104190444.06847.00000430@ng-cj1.aol.com>
Source record: 64408

NEED A SK 510 SOCKET EMAIL PRICE
THANKS JOE KF4TOH

106. International Press Conference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: tr@press-conference.NET
Message-ID: <200001050344.TAA02308@mailbox3.ucsd.edu>
Source record: 64409

Hello

As you are a recognized media professional, you have been registered with the International Press Conference.

Should you wish to modify your categories, simply click on the following link to do so : http://www.press-conference.net/journalists/

If you wish to promote your work, a book you have written, a service you provide, or something of that nature, submit to contact@press-conference.net an informative, business related article and include a short resume and hyperlinks to you web site or e-mail address.

TO UNSUBSCRIBE :
If at any time you wish to unsubscribe, simply send us an empty e-mail message to remove-pressconference@addsites.com

Salutations from press-conference.net

107. Re: Schematic on pc

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <84u5jjfgq1@bbs.aeminium.pt>
Source record: 64410

Super Sport <rerickso@eidnet.org> wrote:
> Where can one find a shareware type of a program that will let me draw a
> schematic on my computer . Rick

Hello,
If you use un*x, check gEDA, XCircuit and others at SAL. I can give
you the link to geda:
http://www.geda.seul.org/

Cheers,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

108. Heath Items For Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Gregg E." <Gregg.E@worldnet.att.net>
Message-ID: <84v3m2$em7$1@bgtnsc03.worldnet.att.net>
Source record: 64411
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap

For Sale All Heath Items PLEASE RESPOND VIA MY E-MAIL

(1) HW-16 C/W Transceiver Complete And Working
With Toggle Switch Added To The Front Cover On The RH Side For A Narrow Filter Modification. All Tubes Tested Good. Asking 65.00 Plus Shipping No Crystals.

(1) HD-1410 Keyer Works (Volumn Seems A Little Low) Asking 45.00 Plus Shipping.
The Ext Keyer Input Jack Has Been Converted From RCA To A 1/8 Inch Plug. (More Modern)
This Is An Iambic Electronic Keyer With Built In Paddles Adjustable Speed And Volumn An Excellant Compact Keyer Combo.

(1) DX-60 B Cover Has Been Repainted Blue All Tubes Tested Good Rig Seems To Work Fine. Asking 65.00 Plus Shipping

(1) HR-10B Receiver Not Working So Good. All Tubes Tested Fine The Unit Receives But Cannot Seem To Tune In SSB Stations. Also Has The Jumper Plug For Jumping The Mute Pins. Asking 45.00 Plus Shipping

I Recently Obtained These Items For The Sole Purpose Of Gaining A HG-10B VFO The Items Are Left To Be Disposed Of. These Items Have Been Stored For A Long Time I Cleaned Them Up Some What And Cleaned The Tubes Sockets And They All Seem To Come To Life. The HW-16 Worked OK For Me I Logged A Few Stations On 80 40 & 15 With It Using One Of My Old Crystals From Another Rig. The DX-60 Loaded Up Fine For Me On 80 CW Where I Worked A Nearby Ham Receiving With My Kenwood.
The HD-1410 Keyer Works But The Volumn Is Much Lower Than My Own HD-1410.
The HR-10B Fires Up And Receives The BFO Will Engage But Tuning In The SSB Voices Is Near Impossible.
I Would Thing An Alignment And Some Cleaning Might Cure This Problem.

I Believe These Units To Be Complete Please Ask If You Have Any Questions I Am Not A Real Knowledgable Person On Heath But Have Research These Best I Could. All Items Sold As Is Plus Shipping From 77065
73's W5IDX
W5IDX@worldnet.att.net

109. Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: VE6INM <ve6inm@telusplanet.net>
Message-ID: <84voktlr1@nnrp1.deja.com>
Source record: 64412

One of my current projects is the restoration of an old Trio/Kenwood TS-600 radio. While going through the rig and restoring everything to the factory specs, I have across a bit of a problem. While setting up the S-meter sensitivity, the service manual states that the S-1 level is referenced to 0.5mV from the sig gen and S-9 is referenced at 50.0mv. Making the assumption that this is a misprint and both voltages should be microvolts not millivolts, is there an "accepted standard" for what an S-9 reading really represents. All of my old books and service manuals are wishy washy concering this, stating that the reading is all relative. About the best I could find from a "reliable" source, was an article by Art Collins from back in the early fifties. He suggested that 50.0uV of antenna input voltage should be referenced as S-9 and each downward S-unit be 6dB down from that. If there is not an accepted standard, what the heck am I doing reporting signal strength back to another station when I really don't know what that strength is? Or is this tired old brain just missing something real simple. Any help or insight would be greatly appreciated.
Best wishes for Year 2000.
73 de Glenn, VE6INM

Sent via Deja.com http://www.deja.com/
Before you buy.

110. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Corky <corkyNOcoSPAM@myremarq.com.invalid>
Message-ID: <065f8722.c8152fc1@usw-ex0107-043.remarq.com>
Source record: 64413

Try this link, they may have the info.

http://www.nostalgiaair.org/NostalgiaAir/otcr.htm

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

111. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <387353BB.E8708C7D@concentric.net>
Source record: 64414

12A6: 12.6 Volts @ .5 Amps (500 mA)
12SN7: 12.6 "" @ .3 Amps (300 mA)
(From the 1947 ARRL handbook)
Jim W5AOX

Brokebob wrote:

> I would appreciate someone looking up the filament currents for a 12A6 and
> 12SN7 Pease e-mail currents direct to
>
> brokebob@aol.com
>
> Thanks

112. looking for a Tek 491 manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: deritchie@nospamyahoo.com
Message-ID: <3873710d.50746589@news.corp.hp.com>
Source record: 64415

I am looking for a Tek 491 spectrum analyzer repair and/or operations manual. If anyone has one or has a good point to sources, I would appreciated it if you dropped me a line... change the address as appropriate.

73, Dave N4DJS
deritchie@nospamyahoo.com

113. alignment help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Mike Coslo <mjc5@psu.edu>
Message-ID: <387377B7.7E539D46@psu.edu>
Source record: 64416

I have an old Mohican reciever that is in need of a realignment. It has been over 25 years since I have done such a thing, so I'm really rusty on the process.

Anyone know of any web resources on the subject?

- Mike -

114. HEATH HR-10 B SOLD Heath For Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Gregg E." <Gregg.E@worldnet.att.net>
Message-ID: <84vtt7$t3m$1@bgtnsc03.worldnet.att.net>
Source record: 64417
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap

For Sale All Heath Items PLEASE RESPOND VIA MY E-MAIL

(1) HW-16 C/W Transceiver Complete And Working
With Toggle Switch Added To The Front Cover On The RH Side For A Narrow Filter Modification. All Tubes Tested Good. Asking 65.00 Plus Shipping No Crystals.

(1) HD-1410 Keyer Works (Volumn Seems A Little Low) Asking 45.00 Plus Shipping.
The Ext Keyer Input Jack Has Been Converted From RCA To A 1/8 Inch Plug. (More Modern)
This Is An Iambic Electronic Keyer With Built In Paddles Adjustable Speed And Volumn An Excellant Compact Keyer Combo.

(1) DX-60 B Cover Has Been Repainted Blue All Tubes Tested Good Rig Seems To Work Fine. Asking 65.00 Plus Shipping

SOLD (1) HR-10B Receiver Not Working So Good. All Tubes Tested Fine The Unit Receives But Cannot Seem To Tune In SSB Stations. Also Has The Jumper Plug For Jumping The Mute Pins. Asking 45.00 Plus Shipping

I Recently Obtained These Items For The Sole Purpose Of Gaining A HG-10B VFO The Items Are Left To Be Disposed Of. These Items Have Been Stored For A Long Time I Cleaned Them Up Some What And Cleaned The Tubes Sockets And They All Seem To Come To Life. The HW-16 Worked OK For Me I Logged A Few Stations On 80 40 & 15 With It Using One Of My Old Crystals From Another Rig. The DX-60 Loaded Up Fine For Me On 80 CW Where I Worked A Nearby Ham Receiving With My Kenwood.
The HD-1410 Keyer Works But The Volumn Is Much Lower Than My Own HD-1410.
The HR-10B Fires Up And Receives The BFO Will Engage But Tuning In The SSB Voices Is Near Impossible.
I Would Thing An Alignment And Some Cleaning Might Cure This Problem.

I Believe These Units To Be Complete Please Ask If You Have Any Questions I Am Not A Real Knowledgable Person On Heath But Have Research These Best I Could. All Items Sold As Is Plus Shipping From 77065
73's W5IDX
W5IDX@worldnet.att.net

115. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <t7Lc4.6413$475.150175@news4.giganews.com>
Source record: 64418

Originally S units were estimated by ear, with S9 being 'extremely strong' and S1 being 'extremely weak.' Then someone invented the S meter.

For a while there was some variation in standards, with S9 being either 50 or 100 microvolts and an S unit being 6 dB or so, sometimes 5 dB.

Currently it seems standard for S9 to be 50 microvolts and 6 dB per S unit. That is, in a 50 Ohm system.

73, Bob K6DDX

116. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38738D18.729BFDA0@eznec.com>
Source record: 64419

Some receivers seem to be adjusted to 50 uV for S-9, but very few if any are 6 dB per S unit. Most are less, and many are much less. Most vary considerably over the scale. My Icom 730, for example, varies from 1.4 to 4.0 dB per S unit over the scale. "10 dB" increments over S-9 vary from 5.6 to 13.5.

If you assume your S meter is showing 6 dB per S unit, you can come to some very wrong conclusions. I frequently give a talk on antenna fundamentals, and one of several claims I make at the beginning is that I'll tell how to make a 3-element beam with 3 S-units of gain compared to a dipole. No problem. On my Icom, S-2 to S-5 is 5.2 dB, a cinch for 3 elements.

Roy Lewallen, W7EL

Bob wrote:
>
> Originally S units were estimated by ear, with S9 being 'extremely strong'
> and S1 being 'extremely weak.' Then someone invented the S meter.
>
> For a while there was some variation in standards, with S9 being either 50
> or 100 microvolts and an S unit being 6 dB or so, sometimes 5 dB.
>
> Currently it seems standard for S9 to be 50 microvolts and 6 dB per S unit.
> That is, in a 50 Ohm system.
>
> 73, Bob K6DDX

117. Re: looking for a Tek 491 manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38738D83.611B3334@eznec.com>
Source record: 64420

The source of manuals for older Tek equipment is Deane Kidd, phone
503-625-7363.

Roy Lewallen, W7EL

Dave Ritchie wrote:
>
> I am looking for a Tek 491 spectrum analyzer repair and/or operations
> manual. If anyone has one or has a good point to sources, I would
> appreciated it if you dropped me a line... change the address as
> appropriate.
>
> 73, Dave N4DJS
> deritchie@nospamyahoo.com

118. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Eamon Skelton"
Message-ID: <947102409.295793828@news.indigo.ie>
Source record: 64421

What is S-9 Voltage? How long is a piece of string?

I can't remember where, but I have read that S9 = 50 microVolts
and one S unit = 6dB. There is lots of debate about this. Some
people regard S9 as 30 microvolts and one S unit as 3dB.

This raises another question. Is it 50 microVolts peak,
peak to peak, or RMS?

73, Ed. EI9GQ.

--

Remove 'X' to reply by e-mail.

EI9GQ Home brew radio page:
http://www.qsl.net/ei9gq

119. Need TRW transistor specs or xref info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <lvNc4.26$Ru.1633@news.inreach.com>
Source record: 64422

Does anyone have specs or cross ref info for the following transistors?

2N2887 (late 60's vintage)
PT4571A (late 70's)
PRT9862 "

I have a pretty good library of specs but cannot find these listed. Any help would be much appreciated.

Roger K6XQ

120. Have 11AF9 tubes-need sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <uLNc4.28$Ru.1814@news.inreach.com>
Source record: 64423

I recently got 11 of these interesting tubes. Does anyone know of a source for the 10 pin sockets? I tried the obvious places on the web with no luck.

Also, 11 of them is more than I am likely to use and would be willing to trade some of them for sockets. They are NIB, 10 Sylvania and 1 RCA.

Please reply via e-mail direct...thanks

Roger K6XQ

121. beacon frames in packet ax25

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: asena@bigfoot.com
Message-ID: <3873af00.9747217@news.telepac.pt>
Source record: 64424

Hello everyone !!

I am writting some code to a uC to send small beacon frames in packet
ax.25, into the RF spectrum.
I am having some problems in getting the code right, because apart
from the manuals from ax25, i have no way to see what an ordinary
Baycom sends trough the serial port.
Anyone has ideas? thanks

Antonio Sergio Sena
asena@bigfoot.com

122. Re: beacon frames in packet ax25

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Robert <DC6XS> Eckelmann" <robert.eckelmann@netsurf.de>
Message-ID: <3873B386.3E50C24B@netsurf.de>
Source record: 64425

Hello!

> I am having some problems in getting the code right, because apart
> from the manuals from ax25, i have no way to see what an ordinary
> Baycom sends trough the serial port.
> Anyone has ideas? thanks
Have a look at the Linux-Baycom-driver..

73 de Robert dc6xs

123. Re: Grid drive, or cathode drive????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Larry Anderson <w6lar@cybertime.net>
Message-ID: <3873B57B.F00D26EF@cybertime.net>
Source record: 64426
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Who says "no commercial manufacturer makes anything but zero bias gorunded grid type" amplifiers? One I can name among others is QRO. Sorry Ross but your
wrong! But I do agree that for a first time project the zero bias, grounded grid amplifier would be much easier to do.

I do like my easy to tune, low power drive, grid driven QRO HF-2500DX.

Larry W6LAR

n0za wrote:

> Finding low powered exciters is somewhat of a problem.
> Almost all transceivers are of the 100 watt range. For a
> grid driven amplifier probably 5 watts or so is about right.
> Grid driven amplifiers require rather substantion bias
> supplies. I think the point to ponder for a while is why
> no commercial manufacturer makes anything but the zero bias
> grounded grid type, and this has been the case for about 30
> years. I suggest some reading in Bill Orr's Radio Handbook.
> 73, Ross
>
> * Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

124. FS: Tubes, Books, & misc.stuff at low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <850krh$266q$1@newssvr04-int.news.prodigy.com>
Source record: 64427
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

e-mail m.pasternack@prodigy.net for 10 page list. Murray

125. Re: FS: Tubes, Books, & misc.stuff at low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: Allen Walker <gaglianowalker@teleweb.at>
Message-ID: <3873D708.EA2FB72C@teleweb.at>
Source record: 64428
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hello- I just saw your posting on Rec audio tubes and wanted to ask for
your 10 page list of items for sale.
Thank You.

Allen Walker

126. PEP power, how do i calculate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <TPQc4.4901$%67.373482@tw11.nn.bcandid.com>
Source record: 64429

the parameters are thus,

50 ohm load, 600vpp, or 300vp, on a 'two tone' steady state
signal. The amp (a single 8930) delivers over 200 watts cw, and
seems to deliver 100 watts of carrier with enough head room to
forward modulate 100% (i am assuming 400 watts or approximately
200vp) as i easily see this much on my scope. So, what is the PEP
with 300vp showing on my scope?
TNX og 73

127. Re: Need TRW transistor specs or xref info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <3873CDE9.3C31F66B@cmcorp.com>
Source record: 64430

Roger Leone wrote:

> Does anyone have specs or cross ref info for the following transistors?
>
> 2N2887 (late 60's vintage)

Silicon NPN 25 Watts 80Vce 15-80 Hfe .35A. Ft 140 Mhz. Audio

>
> PT4571A (late 70's)
> PRT9862 "
>
> I have a pretty good library of specs but cannot find these listed. Any
> help would be much appreciated.
>
> Roger K6XQ

--
Thomas C. Sefranek WA1RHP
ARRL Instructor, Technical Specialist, VE Contact.
http://www.harvardrepeater.org
http://hamradio.cmcorp.com/inventory/Inventory.html

128. FS HEATH (Sold HW-16) (Sold HR-10B) (Sold HD-1410)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Gregg E." <Gregg.E@worldnet.att.net>
Message-ID: <850nmv$e7t$1@bgtnsc02.worldnet.att.net>
Source record: 64431
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.shortwave,rec.radio.swap

OK Fellows & Gals I Have Only The DX-60 B Left To Sell...
73's W5IDX

For Sale All Heath Items PLEASE RESPOND VIA MY E-MAIL

SOLD (1) HW-16 C/W Transceiver Complete And
Working
With Toggle Switch Added To The Front Cover On The RH Side For A Narrow
Filter Modification. All Tubes Tested Good. Asking 65.00 Plus Shipping No
Crystals.

SOLD (1) HD-1410 Keyer Works (Volumn Seems A
Little
Low) Asking 45.00 Plus Shipping.
The Ext Keyer Input Jack Has Been Converted From RCA To A 1/8 Inch Plug.
(More Modern)
This Is An Iambic Electronic Keyer With Built In Paddles Adjustable Speed
And Volumn An Excellant Compact Keyer Combo.

(1) DX-60 B Cover Has Been Repainted Blue All
Tubes Tested Good Rig Seems To Work Fine. Asking 65.00 Plus Shipping

SOLD (1) HR-10B Receiver Not Working So Good. All
Tubes Tested Fine The Unit Receives But Cannot Seem To Tune In SSB Stations.
Also Has The Jumper Plug For Jumping The Mute Pins. Asking 45.00 Plus
Shipping

I Recently Obtained These Items For The Sole Purpose Of Gaining A HG-10B VFO
The Items Are Left To Be Disposed Of. These Items Have Been Stored For A
Long Time I Cleaned Them Up Some What And Cleaned The Tubes Sockets And They
All Seem To Come To Life. The HW-16 Worked OK For Me I Logged A Few Stations
On 80 40 & 15 With It Using One Of My Old Crystals From Another Rig. The
DX-60 Loaded Up Fine For Me On 80 CW Where I Worked A Nearby Ham Receiving
With My Kenwood.
The HD-1410 Keyer Works But The Volumn Is Much Lower Than My Own HD-1410.
The HR-10B Fires Up And Receives The BFO Will Engage But Tuning In The SSB
Voices Is Near Impossible.
I Would Thing An Alignment And Some Cleaning Might Cure This Problem.

I Believe These Units To Be Complete Please Ask If You Have Any Questions I
Am Not A Real Knowledgable Person On Heath But Have Research These Best I
Could. All Items Sold As Is Plus Shipping From 77065
73's W5IDX
W5IDX@worldnet.att.net

129. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-05 00:00:00 UTC
From: "Al Lorona, Jr." <al_lorona@agilent.com>
Message-ID: <3873E0F4.23E3@agilent.com>
Source record: 64432

VE6INM (Glenn) wrote:
>
> One of my current projects is the restoration of an old Trio/Kenwood
> TS-600 radio. While going through the rig and restoring everything to
> the factory specs, I have across a bit of a problem. While setting up
> the S-meter sensitivity, the service manual states that the S-1 level
> is referenced to 0.5mV from the sig gen and S-9 is referenced at > 50.0mv.

Hi, Glenn,

The difference between S9 and S1 is 8 S units. By Kenwood's own numbers, 0.5 uV and 50 uV, that's a difference of 40 dB. That means each Kenwood S unit is 5 dB.

Of course, they had to spec S1 at some level, and they chose what is probably the sensitivity of the receiver, 0.5 uV. Otherwise the noise floor is reached somewhere between S3 and S2, but nobody would want their S meter sitting at S3 after disconnecting the antenna.

All this goes to show the utter failure of the S unit reporting system as anything other than an interesting number to give the other guy. A calibrated voltmeter would be way better, but way expensive. Actually, I take that back. It may not be too expensive if the RF gain, mixer loss, and IF AGC transfer function were well-known. Uh, I guess it would be expensive after all.

The general consensus seems to be that S-9 is 50 uV. When you get around to calibrating the receiver, depending on the signal generator you are using, you will either set the level control on the sig gen to read 50 uV or 100 uV to actually get 50 uV at the input of the TS-600.

This is because some sig gens read "open circuit terminal voltage". When you connect the 50 ohm sig gen output to the 50 ohm input of the receiver, the voltage divider formed by those two will split the available output signal, and half of the "open circuit terminal voltage" will appear at the antenna connector of your radio. On these sig gens, setting the dial to "100 uV" means 50 uV at the input of the receiver. Weird, huh?

R,

Al W6LX

130. Re: Ten-Tec 1253 Regen Kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: kizerian@ced.utah.edu
Message-ID: <8528jg$r3l$1@nnrp1.deja.com>
Source record: 64344

Check out http://www.fix.net/~jparker/norcal/regen/regenstuff.htm

Bruce Kizerian
Centerville, Utah

Sent via Deja.com http://www.deja.com/
Before you buy.

131. FS: Tubes, chokes, nixies, phototubes, MORE...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000106033003.12531.00000896@ng-fm1.aol.com>
Source record: 64345

Like the subject heading says, Iï¿½ve got a TON of stuff that has to go. Iï¿½ll mention a few numbers here, but you REALLY ought to check my ï¿½online garage saleï¿½. I have pictures of EVERYTHING posted there.

Tube numbers; 6336A, 6528A, 5608A, 6130/3C45, 7189A, and more.

UTC CG-48C 75 Hy choke, some assorted Thordarson and Ferranti reactors.

Hewlett-Packard and Burroughs nixie displays.

An assortment of phototubes; 5581, 5583 (with 3-pin socket), and 1P39.

LOTS OF OTHER STUFF!!!

Please check the website at;

http://members.aol.com/Reactor001

Interested in anything? Please respond by email.

Regards,
Tom Mitchell
email - OvrReactor@aol.com

132. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: CU2IJ <rdd87728@mail.telepac.pt>
Message-ID: <851u7niul1@pthp35.telecom.pt>
Source record: 64346

Thank you all for your help.

I am now reading all the info I colect in the net to make a decision.

I also eard that we will have an interesting project from G-QRP Club, the QRP2000, coming soon.

73 and CU on the bands

Luis Pacheco

133. Re: Need TRW transistor specs or xref info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Andy <andy@nospam.demon.co.uk>
Message-ID: <M+RL5NAhdId4EwSB@andrewfairley.demon.co.uk>
Source record: 64347

In article <lvNc4.26$Ru.1633@news.inreach.com>, Roger Leone
<arleone@inreach.com> writes
>Does anyone have specs or cross ref info for the following transistors?
>
>2N2887 (late 60's vintage)
>PT4571A (late 70's)
>PRT9862 "

2N2887 VCBO=100 VCEO=80 IC=1A P=25W HFE 15-80 No substitute listed.
--
Andy

134. Re: Help - What is S-9 Voltage?? THANX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: VE6INM <ve6inm@telusplanet.net>
Message-ID: <852p1u$8nf$1@nnrp1.deja.com>
Source record: 64348

Well Gentlemen,
As usual, the mud is much clearer now. Thank you all for the information and insight. It would appear that Art Collins was pretty much bang on (but that doesn't surprise me). As Roy stated and I must agree, the S-meter linearity on this rcvr or any of my others is just not there, so the 6dB per unit will be pretty difficult to interpret. All of you seem to agree that, at least at some point in the past, 50uV was used to set an S-9 point...whew, at least I had that much right. Al brought up an interesting point about the sig gen voltage as did Eamon. Is this peak, P-P, RMS or what? I am assuming P-P but could be grossly wrong there. Combining all these NEW un-answered questions with this old brain just about overwhelms me. Maybe I'll think like Eamon - "How long is a piece of string", and act like Bob - disconnect the damn meter and use my ears as the gauge!! After all it worked for me 30 years ago, why wouldn't it work now.

Seriously guys, my truly sincere thanx for the input. It is appreciated and certainly will not be wasted. Now I think I'm gonna go build me one of them beams that Roy designs. With the 6dB gain on 3 elements.
Cheers,
73 de VE6INM, Glenn

Sent via Deja.com http://www.deja.com/
Before you buy.

135. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <eNy4GFAB2Ed4Ewy$@ifwtech.demon.co.uk>
Source record: 64349

Al Lorona, Jr. wrote:
>The difference between S9 and S1 is 8 S units. By Kenwood's own numbers,
>0.5 uV and 50 uV, that's a difference of 40 dB. That means each Kenwood
>S unit is 5 dB.

No it doesn't - in almost all commercial transceivers the "value" of the S-unit varies with signal level.

The S-meter *scale* is usually drawn linear, but the linearity of the S-meter *response* depends on how the IF gain changes in response to voltage on the AGC line. In practice this change is only approximately logarithmic, so the S-meter response is non-linear.

According to the detailed equipment reviews in RadCom and QST, the difference between S9 and S9+20dB is usually pretty accurate in modern transceivers, but the value of a single S-point tends to vary between maybe only 2-3dB around S1-2, up to more like 6dB between S8 and S9.

The signal level for S9 varies from maker to maker, model to model, and rig to rig.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

136. CAS or COR circuit on Yaesu FT24oo

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Robin Staebler <Robin@k3fp.com>
Message-ID: <38749B13.C1E6CF95@k3fp.com>
Source record: 64350

I need help with finding a CAS or COR on a Yaesu FT2400 to which I am attempting to connect a simplex repeater.. any ideas

--
Robin Staebler, K3FP
Belfast Maine 04915
http://www.k3fp.com

Please visit this site and donate food to the hungry it's Free!
http://www.hungersite.com

137. ZN416 AM radio chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Fraser Robertson <f.g.robertson@open.ac.uk>
Message-ID: <8528q8$d75$1@clyde.open.ac.uk>
Source record: 64351

Has anyone successfully used this chip runnign from a single 1.5V cell?
I'm specifically referring to the 416, not the ZN414 or ZN415.

Thanks, Fraser G4BJM

138. Microphone Outputs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Robin Birch <robin.birch@postoffice.co.uk>
Message-ID: <947170588.141663@igateway.postoffice.co.uk>
Source record: 64352
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Dear All,
What are reasonable output levels from various types of microphone?.

73 de M5ABD

139. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <3874B3FE.6E268008@concentric.net>
Source record: 64353

Sorry, I just write 'em as I read 'em outa the handbook... And I
double-checked to make sure.
Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A, just
below 12A6 in my manual)
My only other reference is a 1970 ARRL handbook, which no longer lists tubes
that old.
If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
misprint.

abcd1234 wrote:

> sir
>
> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
> from ARRL HB 1956
>
> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
> >12A6: 12.6 Volts @ .5 Amps (500 mA)
> >12SN7: 12.6 "" @ .3 Amps (300 mA)
> >(From the 1947 ARRL handbook)
> >Jim W5AOX
> >
> >Brokebob wrote:
> >
> >> I would appreciate someone looking up the filament currents for a 12A6
> and
> >> 12SN7 Pease e-mail currents direct to
> >>
> >> brokebob@aol.com
> >>
> >> Thanks
> >

140. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <3874B68B.A57E439B@concentric.net>
Source record: 64354

I enjoyed your other responses. I have found that, with typical imported VHF radios such as 2 meter FM units, ONE dB per S-unit is much closer to reality. As noted, it varies, and the perceived audio S-unit reports are probably more accurate so far as signal reporting goes.
Someone can be "S-9" on the S-meter but barely readable through the noise. Another station can be loud and clear, for instance on 10 meters, but is not moving the S meter at all. If you tell the other station he's not moving the S meter, he will invariably be disappointed, so many of us "pad" the report to puff up the other guy. The audio report of loud and clear is much more definitive.
Then, of course, there's the "Contest" version of S-meter or signal reports: "YOUR REPORT IS 5-9, OM, PSE RPT UR CALL, QRZ?"
Jim W5AOX

141. Need info on Kenwood TS570SG!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: rpemers@aol.com
Message-ID: <20000106103604.19673.00000047@ng-fl1.aol.com>
Source record: 64355

Hi,

I need the MARS/CAP mod for the TS570SG in order to be able to drive my Ten Tec 2 meter transverter to cover the entire 2 meter band. The rig has to transmit 28.000 - 32.000MHz to do cover it. Kenwood will not release the info. Without opening up the radio I only have 144-145.700 2 meter coverage. NOTE: I have seen the mod listed on QRZ and another site for the TS570D and DG models and they are completely diferent mods, so this needs to be specific to the TS570SG model.

Thanks!

Ron
KB9E

142. FS: DEC 8K x 18 core memory board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000106133012.25617.00000082@ng-fn1.aol.com>
Source record: 64356

Yeah, I know it's off topic, but I thought some wire-head like me would think this would be a cool collectors piece (I have two, and I want to sell the "extra").

I have a full size picture posted on my "online garage sale" website at;

http://members.aol.com/Reactor001

Interested? Please respond by email.

Regards,
Tom Mitchell
email - OvrReactor@aol.com

143. Re: Microphone Outputs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Fe5d4.10846$905.194290@news5.giganews.com>
Source record: 64357
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

You can expect around one millivolt from a high impedance microphone and correspondingly less from low impedance. Maybe a bit more but it's nice to have some reserve gain.

Check the specifications on the particular microphone you want to use. It will be rated, often, in dB with respect to one millibar or something like that. Of course you should know how sensitive you want it to be; if you close talk a microphone you will get higher output and if you want pickup from across the room you won't get much. You can't overload a microphone by yelling into it, as a general rule.

73, Bob K6DDX

144. Re: Have 11AF9 tubes-need sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000106132949.25617.00000081@ng-fn1.aol.com>
Source record: 64358

You should re-post this on < rec.audio.tubes >. I beleive the socket you need is a "decal" (looks like a 9-pin miniature, but has an extra pin). Ned of Triode Electronics (a frequent poster to that gNG) mentioned that he sells them for $1 each.

Regards,
Tom Mitchell

145. Re: PEP power, how do i calculate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <8j5d4.9371$475.205861@news4.giganews.com>
Source record: 64359

I think the PEP is the rms of the peak of the rf envelope. In other words, it's not the peak power at all, just the rms you have at the peak moment of the modulation.

So looking at the oscilloscope, take the absolute peak voltage you see with maximum modulation, and find its rms equivalent for that cycle. For instance, a 200 Volt peak would imply an rms of 141.4 Volts. Into 50 Ohms that would be 400 Watts pep if my mental calculation is correct.

73, Bob K6DDX

146. Re: Daiwa Rotators Can Kill !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: phil-news-nospam@ipal.net
Message-ID: <0f5d4.20$a1.74@newsfeed.slurp.net>
Source record: 64360
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

In rec.radio.amateur.misc David M. Brodbeck <dmbrodbe@mtu.edu> wrote:

| In rec.radio.amateur.homebrew Hamish Moffatt <hamish@rising.com.au> wrote:
|> It sounds like an earth leakage detector (or safety switch) would
|> be a good investment at your QTH! They detect current in the earth
|> wiring and if any is detected, they trip and disconnect the active wire.
|> This assumes that the metal case of your rotator controller is earthed
|> (3 pin mains connector).
|
| --> Is this the same thing we call a GFI (ground fault interruptor) in
| the states? Kind of sounds like it. They are a good idea, though it
| had never occurred to me to install one in the shack. Would be a nice
| addition to any electronics workbench, too. They're required in
| bathrooms and for outdoor circuits, in new construction, here.

A GFI in a hamshack would be a very good idea. They are a good idea
anywhere there is water, since any exposure to the hot wire can lead
to fatal currents. In a hamshack, there probably isn't water, but
there are certainly other ways to complete the circuit with yourself
as the load.

--
Phil Howard - KA9WGN	for headlines that	Just say no to absurd patents
phil-nospam@ipal.net	really matter:	Boycott Amazon.Com (AMZN)
Dallas - Texas - USA	linuxhomepage.com	Shop http://bn.com/ instead

147. Re: Schematic GSB201 needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000106120926.7577D-100000@oso.slonet.org>
Source record: 64361

Jim Palmer, jpalmer@slonet.org is in need of a schematic of the GSB201 linear amplifier. Just the schematic will do rather than the entire book. Can someone help? Cliff K7RR

148. Homebrew 6 meter mobile ant.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Greg <memory1@sympatico.ca>
Message-ID: <P37d4.27997$7S.49590@news20.bellglobal.com>
Source record: 64362

Hi all ,
Does anyone have any plans or ideas for a 6 meter vertical mobile
antenna . I will operating the fm portion of the band in North America .
Thanks ,
Greg de KC8KUG

149. Re: FS: DEC 8K x 18 core memory board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38752830.9A459D29@home.com>
Source record: 64363

Probably more valuable to contribute it to the computer museum in Boston and take the tax deduction.

OvrReactor wrote:

> Yeah, I know it's off topic, but I thought some wire-head like me would think
> this would be a cool collectors piece (I have two, and I want to sell the
> "extra").
>
> I have a full size picture posted on my "online garage sale" website at;
>
> http://members.aol.com/Reactor001
>
> Interested? Please respond by email.
>
> Regards,
> Tom Mitchell
> email - OvrReactor@aol.com

150. Re: Ten-Tec 1253 Regen Kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: basil <basil@isoplethics5.free-online.co.uk>
Message-ID: <E88d4.7812$T3.102899@stones>
Source record: 64364

> Hi John,
>
> I am certainly interested in those articles. My plans are to build the
> RX on two separate chassis, one for power supply and audio stages and
> the other for the detector and possibly an RF-amp. So I would be able to
> try different kinds of detectors. Most parts needed are here already. A
> problem is to get the plug-in coil forms, so I will have to make them
> myself from PVC tubing and octal plugs. If you could mail the articles
> mentioned to me it would be very kind.
>
> Best regards and mni 73s
> de Udo dk3bi@t-online.de

Plug-in coils formers:

Octal, 1.5" ribbed abd 20 mm, B9A available from Isoplethics, UK.

151. Source of Curtis keyer chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Eamon Skelton <Xnospam@oceanfree.net>
Message-ID: <947200905.1302018561@news.indigo.ie>
Source record: 64365

My friend in GM land has blown up his Curtis keyer.
Does anybody know where he can buy a replacement.

Thanks.

Ed. EI9GQ.

--

Remove 'X' to reply my e-mail.

http://www.qsl.net/ei9gq

Linux 2.2.5-15

152. Re: beacon frames in packet ax25

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: asena@bigfoot.com
Message-ID: <387520b6.19894955@news.telepac.pt>
Source record: 64366

On Wed, 05 Jan 2000 22:11:34 +0100, "Robert <DC6XS> Eckelmann"
<robert.eckelmann@netsurf.de> wrote:

>Hello!
>
>> I am having some problems in getting the code right, because apart
>> from the manuals from ax25, i have no way to see what an ordinary
>> Baycom sends trough the serial port.
>> Anyone has ideas? thanks
>Have a look at the Linux-Baycom-driver..
>
>73 de Robert dc6xs

Thanks, i'll.

153. Re: Homebrew 6 meter mobile ant.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38752B53.32E47EC0@bellsouth.net>
Source record: 64367

Greg wrote:

> Hi all ,
> Does anyone have any plans or ideas for a 6 meter vertical mobile
> antenna . I will operating the fm portion of the band in North America .
> Thanks ,
> Greg de KC8KUG

Find a 2M 5/8 antenna that shows an open from center pin to ground (this ensures it does not use a tapped coil for matching). It will tune up as a 1/4 wave on 6M.

Dale W4OP

154. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3875392C.2175@pop.removethistomailme.net>
Source record: 64368

Al Lorona, Jr. wrote:
>
> This is because some sig gens read "open circuit terminal voltage". When
> you connect the 50 ohm sig gen output to the 50 ohm input of the
> receiver, the voltage divider formed by those two will split the
> available output signal, and half of the "open circuit terminal voltage"
> will appear at the antenna connector of your radio. On these sig gens,
> setting the dial to "100 uV" means 50 uV at the input of the receiver.
> Weird, huh?
>

Yow. I've never heard of that.

As far as I'm aware, the output of any calibrated signal generator with
an N or BNC connector is rated assuming a 50-ohm resistive load.

Any signal generator not matching the above description should not be
used for anything but spare parts.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

155. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000106181125.13257F-100000@oso.slonet.org>
Source record: 64369

The 12A6 has a 150 ma heater. Almost all the 12xx7 series of tubes have
150 ma heater EXCEPT the 12SN7. It has a 300 ma heater. Cliff K7RR

On Fri, 7 Jan 2000, abcd1234 wrote:

> hi jim,
>
> 12a6 is used in some series string hallicrafter radios of the 1950s
> with tubes like 12sk7 12sq7 etc, so it is pretty likely to be 0.15 Amp
>
>
> Jim wrote in message <3874B3FE.6E268008@concentric.net>...
> >Sorry, I just write 'em as I read 'em outa the handbook... And I
> >double-checked to make sure.
> >Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A, just
> >below 12A6 in my manual)
> >My only other reference is a 1970 ARRL handbook, which no longer lists
> tubes
> >that old.
> >If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
> >misprint.
> >
> >abcd1234 wrote:
> >
> >> sir
> >>
> >> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
> >> from ARRL HB 1956
> >>
> >> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
> >> >12A6: 12.6 Volts @ .5 Amps (500 mA)
> >> >12SN7: 12.6 "" @ .3 Amps (300 mA)
> >> >(From the 1947 ARRL handbook)
> >> >Jim W5AOX
> >> >
> >> >Brokebob wrote:
> >> >
> >> >> I would appreciate someone looking up the filament currents for a 12A6
> >> and
> >> >> 12SN7 Pease e-mail currents direct to
> >> >>
> >> >> brokebob@aol.com
> >> >>
> >> >> Thanks
> >> >

> >
>
>
>
>

156. A to D For Rotator Indicator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Lee Smith <ckvnfm@mb.sympatico.ca>
Message-ID: <A6ed4.715$k6.15237@news1.mts.net>
Source record: 64370

Hello Folks:

My Ham IV rotator is developing problems with the wiper arm of the position feedback pot. Right now, on a good day, it might work 10% of the time. This means that in the spring I will have to pull the rotator and do a replacement.

In the last while, I have seen a few good pictures from OLD magazines of stations with a large great circle map on the wall with the beam indicator built in via a selsyn system.

That got me wondering about the method to build a similar indication system based on a stepper motor and an A to D converter. Maybe a back-lit mask that would illuminate the beam pattern onto the map would be another thing on the wishlist.

Does anyone have any circuits out there for this sort of thing already? Or maybe you could recommend a way to go about it.

I think it would make for a neat thing for the shack, as I am going to be doing a "to the walls" tearout of the radio room and it is a good opportunity to incorporate this idea.

73 folks.
Lee Smith
VE4ANC

157. 1.2GHz DUPLEXER NEEDED.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: YZ7REA/45AT142 Vladimir <atomski@EUnet.yu>
Message-ID: <3873E3F9.9F958D7D@EUnet.yu>
Source record: 64433
Body handling: Binary attachment payload not displayed: atomski.vcf

Does anyone have a 1.2GHz duplexer that would like to sell? I need a small input power tollerance (up to 20W max!), separation of 80-90dB @ 40 MHz spacing and the insertion loss as minimum as possible... Doesn't have to be new, a used one is just as good. The price is the key factor.

YZ7REA Vladimir

[One or more binary attachments are retained only in the source text.]

158. Re: Daiwa Rotators Can Kill !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <850obfciq1@campus3.mtu.edu>
Source record: 64434
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew Hamish Moffatt <hamish@rising.com.au> wrote:
> It sounds like an earth leakage detector (or safety switch) would
> be a good investment at your QTH! They detect current in the earth
> wiring and if any is detected, they trip and disconnect the active wire.
> This assumes that the metal case of your rotator controller is earthed
> (3 pin mains connector).

--> Is this the same thing we call a GFI (ground fault interruptor) in
the states? Kind of sounds like it. They are a good idea, though it
had never occurred to me to install one in the shack. Would be a nice
addition to any electronics workbench, too. They're required in
bathrooms and for outdoor circuits, in new construction, here.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"It doesn't take a lot of talent to intercept a surface-to-air
missile with your own airplane." -- John McCain

159. Re: Synchronous detector!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: jbden@aol.com
Message-ID: <20000105205037.17333.00000656@ng-ff1.aol.com>
Source record: 64435

There is a synchronous detector project in the ARRL handbook that was used in a Sangean SW RCVR.
-John-

160. Re: Ten-Tec 1253 Regen Kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: jbden@aol.com
Message-ID: <20000105204709.17333.00000654@ng-ff1.aol.com>
Source record: 64436

>I'm also very much interested in the >circuit as I intend to build a regen
>with tubes. Could you post it to me?

Hi, I came across some old articles about building tube type regens while cleaning my basement and if you're interested I could copy them and mail them to you.

-John-

161. Re: FEDS RAID ELECTRONIC HOBBY VENDORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <850u33$3t7$1@news1.exit109.com>
Source record: 64437

dear dr NO,

R you the one who posted cmsg cancel against the original poster of this
thread ! Aint you one fucking FASCIST PIG !

Abhe Gandu !

no wrote in message <3867e94d$0$211@nntp1.ba.best.com>...
>Raw Power Radio <rawpowerradioNOraSPAM@go.com.invalid> wrote:
>: Story at:
>
>: http://www.2600.com/news/1999/1218.html
>
>Gimme a break!
>
>Don't believe all the crap you read on the net. Besides, isn't it
>a bit self-serving for a bunch of anarchists like the 2600 scum
>to blow everything out of proportion? Bunch of crybaby wankers.
>
>
>Phaedrus
>
>
>--
>

162. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <850ubj$401$1@news1.exit109.com>
Source record: 64438

sir

12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
from ARRL HB 1956

Jim wrote in message <387353BB.E8708C7D@concentric.net>...
>12A6: 12.6 Volts @ .5 Amps (500 mA)
>12SN7: 12.6 "" @ .3 Amps (300 mA)
>(From the 1947 ARRL handbook)
>Jim W5AOX
>
>Brokebob wrote:
>
>> I would appreciate someone looking up the filament currents for a 12A6
and
>> 12SN7 Pease e-mail currents direct to
>>
>> brokebob@aol.com
>>
>> Thanks
>

163. DRAKE TR4C Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Francesco Tamburro <IK8PAE@uniserv.uniplan.it>
Message-ID: <3873f482.1@NT01.uniplan.it>
Source record: 64439

Does anybody know where I could find (online) the manual
or circuit diagram only to a Drake - TR4C - ?
Mny Thanks in advance.
vy '73 es gl de IK8PAE opr. Francesco
JN70FS

164. 2GHz transmitter.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Titus Cheung <titus@ieee.org>
Message-ID: <dATc4.16708$_E6.118850@news1.rdc1.bc.home.com>
Source record: 64440

Dear List:

I'm looking for a way to emit a 2.1-2.2GHz transmitter to test a RF receiver operating at that freq. range. Please suggest any ideas you have. I have the following for now:

1) Build a lambda/4 < 4 cm monopole hooked up to a function generator.

Problem:
There's no function generators operating at 2.1-2.2GHz so I must somehow get a resonator. Can I use a resonator to drive teh monopole directly?

Thanks
Titus

165. Re: PEP power, how do i calculate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: k7itm@aol.com.nospam
Message-ID: <20000105232655.19982.00000203@ng-fc1.aol.com>
Source record: 64441

> the parameters are thus,
>
> 50 ohm load, 600vpp, or 300vp, on a 'two tone' steady state
>signal. The amp (a single 8930) delivers over 200 watts cw, and
>seems to deliver 100 watts of carrier with enough head room to
>forward modulate 100% (i am assuming 400 watts or approximately
>200vp) as i easily see this much on my scope. So, what is the PEP
>with 300vp showing on my scope?
>

PEP = power during an integral number of full cycles at the peak of the RF envelope... = (Vrms[of those cycles])^2/Rload = (Vpeak)^2/(2*Rload). Assuming the peak voltage is 300 volts and nominally sinusoidal and the load is really 50 ohms, it's 300^2/(2*50) = 900 watts. The RMS voltage is about 300/sqrt(2).

Cheers,
Tom

166. Re: 1.2GHz DUPLEXER NEEDED.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <387422FD.7603A0C8@nettally.com>
Source record: 64442

These are scarce in the US. But new ones can be obtained from TX-RX Systems Inc. Angola NY USA. Phone (716)-549-4700. TX-RX makes high quality commercial land mobile duplexers. Probably will set you back a few US Dollars, But will be excellent quality. Ask for Sheldon Lay and tell him I sent you!

YZ7REA/45AT142 Vladimir wrote:

> Does anyone have a 1.2GHz duplexer that would like to sell? I need a
> small input power tollerance (up to 20W max!), separation of 80-90dB @
> 40 MHz spacing and the insertion loss as minimum as possible... Doesn't
> have to be new, a used one is just as good. The price is the key factor.
>
> YZ7REA Vladimir

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come at you rapidly.

167. Re: Ten-Tec 1253 Regen Kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-06 00:00:00 UTC
From: Udo Peters <dk3bi@t-online.de>
Message-ID: <38744006.F81D5858@t-online.de>
Source record: 64443

J B Den wrote:
>
> >I'm also very much interested in the >circuit as I intend to build a regen
> >with tubes. Could you post it to me?
>
> Hi, I came across some old articles about building tube type regens while
> cleaning my basement and if you're interested I could copy them and mail
> them
> to you.

Hi John,

I am certainly interested in those articles. My plans are to build the RX on two separate chassis, one for power supply and audio stages and the other for the detector and possibly an RF-amp. So I would be able to try different kinds of detectors. Most parts needed are here already. A problem is to get the plug-in coil forms, so I will have to make them myself from PVC tubing and octal plugs. If you could mail the articles mentioned to me it would be very kind.

Best regards and mni 73s
de Udo dk3bi@t-online.de

168. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <853cqo$u3$1@news1.exit109.com>
Source record: 64371

hi jim,

12a6 is used in some series string hallicrafter radios of the 1950s
with tubes like 12sk7 12sq7 etc, so it is pretty likely to be 0.15 Amp

Jim wrote in message <3874B3FE.6E268008@concentric.net>...
>Sorry, I just write 'em as I read 'em outa the handbook... And I
>double-checked to make sure.
>Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A, just
>below 12A6 in my manual)
>My only other reference is a 1970 ARRL handbook, which no longer lists
tubes
>that old.
>If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
>misprint.
>
>abcd1234 wrote:
>
>> sir
>>
>> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
>> from ARRL HB 1956
>>
>> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
>> >12A6: 12.6 Volts @ .5 Amps (500 mA)
>> >12SN7: 12.6 "" @ .3 Amps (300 mA)
>> >(From the 1947 ARRL handbook)
>> >Jim W5AOX
>> >
>> >Brokebob wrote:
>> >
>> >> I would appreciate someone looking up the filament currents for a 12A6
>> and
>> >> 12SN7 Pease e-mail currents direct to
>> >>
>> >> brokebob@aol.com
>> >>
>> >> Thanks
>> >
>

169. Re: Rx Multicoupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3875048a.559571@news.online.no>
Source record: 64372

On Tue, 4 Jan 2000 21:23:14 -0600, "Lionel" <lbooth@ametro.net> wrote:

>I need a schematic to build a rx multicoupler to feed 3 or 4 hf rx's. Any
>references to published literature would be great.
>
>
>
>
need a 12dB amplifier, possibly high IP and a divide by 4 hybrid,
consisting of 5 equal resistors, value 30 ohm, 33 ohm will work well

The amplifier may use a 2N3866 or BFR96. Have a circuit for 14dB
broadband amplifier (1-30MHz) with 2N3866 just tested, also tested a
BFR96 amplifier, this has 15dB gain, was found in QST, but such
circuits are shown in W7ZOI/W1FB's book "Solid state design manual"

my circuits are available as gif files. With 0.1uF capacitors they
will work down below 200kHz, I modified them for use as pre-amps for
136/1800kHz receiption, with 0/10/20dB attenuator

The problem using 50 ohm amplifier with the simple divider is that
unused outputs must be terminated (47 ohm resistor).

73 Jan-Martin LA8AK

170. Re: PEP power, how do i calculate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <854rok$n30$1@nnrp1.deja.com>
Source record: 64373

In article <8j5d4.9371$475.205861@news4.giganews.com>,
"Bob" <balbert@cnmnetwork.com> wrote:
> I think the PEP is the rms of the peak of the rf envelope. In other
words,
> it's not the peak power at all, just the rms you have at the peak
moment of
> the modulation.
>
> So looking at the oscilloscope, take the absolute peak voltage you see
with
> maximum modulation, and find its rms equivalent for that cycle. For
> instance, a 200 Volt peak would imply an rms of 141.4 Volts. Into 50
Ohms
> that would be 400 Watts pep if my mental calculation is correct.
>
> 73, Bob K6DDX
>
>

We must be careful with the words. RMS is applied to voltages and currents, not to powers. As it is a mathematical calculation, obviously a RMS power can be calculated but it has no useful meaning.
When we have a DC on a resistor R, the power (time constant) is V²/R or I².R but when we are dealing with AC (or generally variable voltages/currents) we can see that the power is time dependent (not time constant any more) then we define 2 powers: the instant power and the average power. The former still is V²/r or I².R (with V and I the instant voltage and current). But the latter has to be calculated. As it is an average value, it it time constant. So, we can search for a DC value of the voltage/current that produces on that resistor the same power of the AC during a certain time (if the AC is periodic this time is the period). This constant voltage/current value is called the effective value of the variable voltage/current. But mathematically it is easily shown that this effective value is the RMS value of the voltage/current, that is, its root mean square value, a saure root of an time integral calculus.
So, the effective or RMS value of a variable voltage/current signal is the value of a DC signal that, applied to a resistor, produces the same power that the original variable one (it occurs that, for pure sinusoidal signals, the RMS is the peak value divided by sqrt(2)).
Thus, we talk about average power and NOT about RMS power.
PEP is a power calculated with the voltage/current peak value and is related to the average one. For fixing this relation, PEP is normally referred to a two tone steady state modulating signal.

--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

171. Re: Source of Curtis keyer chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <854s3o$n72$1@nnrp1.deja.com>
Source record: 64374

In article <947200905.1302018561@news.indigo.ie>,
Eamon Skelton <Xnospam@oceanfree.net> wrote:
>
> My friend in GM land has blown up his Curtis keyer.
> Does anybody know where he can buy a replacement.
>
> Thanks.
>
> Ed. EI9GQ.
>
> --
>
> Remove 'X' to reply my e-mail.
>
> http://www.qsl.net/ei9gq
>
> Linux 2.2.5-15
>
>

Which is(are) the chip(s)?
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

172. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Roland Cordesses <cordesse@opgc.univ-bpclermont.fr>
Message-ID: <387593F9.4D2A0EE8@opgc.univ-bpclermont.fr>
Source record: 64375
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

Hi Carel
An other interesting article about Ladder filter is the following :

Designing and Building High Performance Crystal Ladder Filter by
J.Makhinson in QEX Jan 1995 pp : 3- 17.

The author uses the tools of Hayward (in Introduction to Radio Frequency
Design) to develop high performance filters (low ripple, high shape
factor,...)

I have used the Hayward and Makhinson papers to succesfully design
several ladder filters some years ago :
- 12 poles SSB filter (BW : 2.3kHz, IL : 2.5dB, S.F : 1.6)
- 6 poles CW filters (BW 360Hz, I.L : 10dB)
- 4 poles Noise filter (BW : 2.7kHz, I.L : 2.5dB)
All these filters are 50 ohms and the input of the SSB one is connected
to the post mixer amplifier via a 6dB attenuator in order to limit
impedance changes.
Good luck and 73's

Roland Cordesses / F2DC

==========

"Carel Mulder (PA0CMU)" a ï¿½crit :
>
> Hi groups,
>
> Thanks all for replying. I already have copies of the article now.
>
> Hints and tips for building crystal ladder filters are welcome.
>
> 72 Carel, PA0CMU.

173. Re: Help - What is S-9 Voltage??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <8k7b7s810c20v9drgufvjomgkemragftg3@4ax.com>
Source record: 64376

On Thu, 06 Jan 2000 17:54:04 -0700, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Al Lorona, Jr. wrote:

>> This is because some sig gens read "open circuit terminal voltage". When
>> you connect the 50 ohm sig gen output to the 50 ohm input of the
>> receiver, the voltage divider formed by those two will split the
>> available output signal, and half of the "open circuit terminal voltage"
>> will appear at the antenna connector of your radio. On these sig gens,
>> setting the dial to "100 uV" means 50 uV at the input of the receiver.
>> Weird, huh?

>Yow. I've never heard of that.

>As far as I'm aware, the output of any calibrated signal generator with
>an N or BNC connector is rated assuming a 50-ohm resistive load.

>Any signal generator not matching the above description should not be
>used for anything but spare parts.

Remember to problem of specifying the sensitivity of BC FM receivers?
Some specified the input as the generator open circuit voltage into
300 ohms (balanced), other into 75 ohms (unbalanced). But since
specifying the actual antenna terminal voltage gives smaller numbers,
which look better in advertisements, more and more companies specified
the loaded generator voltage into either 300 or 75 ohms. I guess some
even specified it at 50 ohms to get a smaller number.

The standard finally adapted for BC receivers was to express the
required input _power_ for a specific SNR and specify the power in dBf
(decibels relative to a femtowatt or 1E-15 W). In this way it did not
matter what the impedance was and it also solved the open
circuit/loaded issue. The sensitivity for monophonic reception is
about 1E-14 W or 10 dBf or -140 dBW or -110 dBm.

Thus if S9 is 50 uVrms into 50 ohms, as usually defined for HF gear,
this is equivalent to -103 dBW, -73 dBm or +47dbf. With S9 at -73 dBm,
S0 would be (assuming 6dB/S unit) -127 dBm. For a NBFM receiver, the
usable sensitivity is about -120 dBm, while for VHF/UHF receivers
around -130 dBm.

But due to the higher background noise on MF/HF there is not much need
for SSB receiver sensitivities better than -110 .. -120 dBm, thus, a
calibrated S meter would show S3 .. S1 even without an antenna.

As a curiosity (and to add to the confusion), I have seen some claims that S9 for VHF/UHF equipment should be 5 uVrms, but I have not seen any formal definitions about this :-).

Paul OH3LWR

174. Re: Daiwa Rotators Can Kill !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <3i3b7so7mme4ems7804q1h6av2iee6s7b7@4ax.com>
Source record: 64377
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

On Thu, 06 Jan 2000 18:34:36 GMT, phil-news-nospam@ipal.net wrote:

>A GFI in a hamshack would be a very good idea.

And get all kind of false triggering due to RFI...

While the GFI is a good idea when working inside a live device on the bench, however, the GFI it is not a substitution for an isolation transformer. Due to the RF sensitivity of the GFI, it might not be a good idea to take all the normal operating power through the GFI. With a separate grounding electrode for the antenna tower, you quickly end up in ground loop currents even without the presence of RF, which can trigger the GFI.

For safe operation, it is important that every chassis is securely connected to the protective ground and that all wires and connectors are selected based on the fuse rating (and preferably using even thicker wires) to insure that the fuse is blown quickly, if the live ever gets connected to the chassis.

Paul OH3LWR

175. Re: Source of Curtis keyer chips?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Greg Blair <gblair@sympatico.ca>
Message-ID: <3875F770.5E16D056@sympatico.ca>
Source record: 64378

Try MFJ since they use Curtiss chips in their keyers...
Cheers
Greg, ve0acr/vk2iod

Eamon Skelton wrote:

> My friend in GM land has blown up his Curtis keyer.
> Does anybody know where he can buy a replacement.
>
> Thanks.
>
> Ed. EI9GQ.
>
> --
>
> Remove 'X' to reply my e-mail.
>
> http://www.qsl.net/ei9gq
>
> Linux 2.2.5-15

176. L.O.S.A Contribution Form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: cjX@hth.com
Message-ID: <387612ad.262892@news.sverige.net>
Source record: 64379
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

```
List Of Stamp Applications (L.O.S.A for short)
==============================================

If you have done something (big or small) with the BASIC Stamp
that you are willing to tell others please use the form below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Then e-mail the form to:

cj@hth.com

With the following as the subject:

L.O.S.A Contribution

Or you could point your Web-browser to the following URL and fill
in the L.O.S.A form on the Web-page...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###

http://www.hth.com/losa/

The latest version of L.O.S.A is always available at the above
mentioned both in ASCII and in ZIP-file format for easy download.
An index of L.O.S.A is posted to the following mailing lists and
news groups, I will update it approx. once a month.

Mailing lists:

BASIC Stamp Mailing List

News groups:

comp.robotics.misc
comp.home.automation
sci.electronics
sci.electronics.misc
rec.radio.amateur.homebrew

FTP-site:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

You can also find the latest version on the following URL...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###
```

http://www.hth.com/losa/

[--- cut ---]

```
================================================================================
- L.O.S.A Contribution Form -
================================================================================
New Contribution [ ] Update [ ]
--------------------------------------------------------------------------------

Title :
Author: Date:

E-mail: (optional)
--------------------------------------------------------------------------------

Stamp model : BASIC Stamp/BS1-IC/BS2-IC/BS2SX-IC
Code available: YES/NO
Filename : (optional)
URL : (optional)
--------------------------------------------------------------------------------
Description : (5-50 rows describing your application)

================================================================================
```

[--- cut ---]

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

```
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
```

177. Re: What do these parts do?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: kdmorton@teleport.com
Message-ID: <38762944.7300430@news.teleport.com>
Source record: 64380

On Wed, 29 Dec 1999 13:08:21 -0500, Robert Lyons <boblyons@umich.edu>
wrote:

<SNIP>
>
>Who else remembers starting out with these multi-project breadboard kits?
>Mine was a Heathkit, and one of my fav projects was a little one-transistor
>oscillator that ran on the AM broadcast band and had a range of tens of
>feet. At 10, I thought it was absolutely the coolest thing!
>
>Good luck, Paul.
>

I do! I got my start much the same way as Paul...at 7 or 8 I was
tearing apart old TV's saving all those wierd little thingies and
later asking people what they were. Later my Dad had one of the early
30-in-one (that did NOT have a breadboard, only the spring things)
that I thought was the coolest thing in the world!

For Christmas this year I bought my 11 year old one of the 300-in-one
kits at Radio Shack, and I'm not sure which one of us enjoy it more! I
think these are an excellent tool to help you get started. Be advised
that the 300-in-one can be a little intimidating to the newbie, so you
might start with the smaller one.

73, Ken
KD7FLE

178. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <fnbc7ss58jqi3j5nhdifunu38dhc30cknq@4ax.com>
Source record: 64381
Cross-posted to:
alt.ham-radio.hf,uk.radio.amateur,rec.radio.amateur.homebrew,alt.radio.amateur,alt.nl.radio.zendamateur.gelicentieerd

```
->Designing and Building High Performance Crystal Ladder Filter by
->J.Makhinson in QEX Jan 1995 pp : 3- 17.

I'm having some trouble locating the two Hayward papers (QST May '82 and July
'87) and don't have a CLUE where to find QEX. Does anybody know if these
documents are available online anywhere?

I can have my school library do a literature search and probably come up with
copies, but they generally take half a semester to get the data.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup
```

179. Re: PEP power, how do i calculate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387634BF.435153E0@agilent.com>
Source record: 64382

py1ll@my-deja.com wrote:

(most of a clear and accurate treatise on the meaning of "RMS" and its use...clipped...)

> PEP is a power calculated with the voltage/current peak value and is
> related to the average one. For fixing this relation, PEP is
> normally referred to a two tone steady state modulating signal.

But we should be clear: the PEP is NOT the instantaneous peak power, but the average power over one complete RF cycle (or a small integral number of cycles) at the maximum of the time-varying signal. It can be the peak of some specific signal, or it can be the peak power the amplifier handles/is designed to handle.

For example, you might feed an amplifier rated at 200W PEP a two-tone test signal that hits 100W PEP. Into a 50 ohm load, on envelope peaks, the 100W PEP signal would have cycles that have an output RMS voltage of 70.71V, and a peak voltage of 100V. But the amplifier, rated at 200W PEP, is still capable of peaks of 100V RMS which is the same as 141.4V peak in the narrowband signal. And knowing the PEP really tells you nothing of the average RF power, unless you also know the envelope, since the signal could be CW, where the PEP is maintained all the time and is equal to average, or it could be from a very "peaky" impulsive voice waveform, and average far, far below the peak level. (It's good to know, for an amplifier, what average power it is rated for. That's not necessarily the same as the PEP rating, and depends on cooling and power supply capability in addition to the amplifier component instantaneous voltage and current ratings.)

Cheers,
Tom

180. Re: want 2meter qrp txciever kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: kdmorton@teleport.com
Message-ID: <3876447f.14272937@news.teleport.com>
Source record: 64383

On Mon, 03 Jan 2000 18:00:26 -0800, "William F. Hagen"
<whagen@inreach.com> wrote:

>sorry for the ambiguity, I am looking for cw qrp txciever, a couple fo
>watts at best, interested in setting up local network with the new tech
>licenses, since they wont get hf priveledges without general class
>licenses.
>Looking for cw txcievers similar to pixie, peanut, michigan mighty mite,
>etc, but with both rx and tx, simple etc,
>thanks,
>kc6ufe

I would think it would be more cost effective to build a simple
audio-oscillator to send via FM, and use existing FM equipment. I have
seen a couple of these, and they seem pretty simple.

73, Ken
KD7FLE

181. 60Khz NIST receiver info needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000107145635.01021.00000642@ng-cg1.aol.com>
Source record: 64384

Can anyone direct me to a place that makes modules to receive the 60Khz time signal? Or alternately, a place to find construction information. I can find whole clocks that use the technology, but seem to be having problems finding info on the technology itself. Thanks.

Doug Moore KB9TMY

182. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <38765791.E69F85C4@concentric.net>
Source record: 64385

Well, that's what I get for being helpful and looking up data in the Handbook for someone.
My 1944 ARRL handbook must be mistaken, as it plainly states 500 mA for the 12A6 at 12.6 volts...
However, I have conclusive proof of the current drain. Unlike you guys, I found a NIB 12A6 (RCA) and
applied 12.6 VDC to the filament (pins 2 and 7), and the MEASURED current drain is..... 153 mA.
So there.
Jim W5AOX

Clifford Buttschardt wrote:

> The 12A6 has a 150 ma heater. Almost all the 12xx7 series of tubes have
> 150 ma heater EXCEPT the 12SN7. It has a 300 ma heater. Cliff K7RR
>
> On Fri, 7 Jan 2000, abcd1234 wrote:
>
> > hi jim,
> >
> > 12a6 is used in some series string hallicrafter radios of the 1950s
> > with tubes like 12sk7 12sq7 etc, so it is pretty likely to be 0.15 Amp
> >
> >
> > Jim wrote in message <3874B3FE.6E268008@concentric.net>...
> > >Sorry, I just write 'em as I read 'em outa the handbook... And I
> > >double-checked to make sure.
> > >Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A, just
> > >below 12A6 in my manual)
> > >My only other reference is a 1970 ARRL handbook, which no longer lists
> > tubes
> > >that old.
> > >If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
> > >misprint.
> > >
> > >abcd1234 wrote:
> > >
> > >> sir
> > >>
> > >> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
> > >> from ARRL HB 1956
> > >>
> > >> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
> > >> >12A6: 12.6 Volts @ .5 Amps (500 mA)
> > >> >12SN7: 12.6 "" @ .3 Amps (300 mA)

> > >> >(From the 1947 ARRL handbook)
> > >> >Jim W5AOX
> > >> >
> > >> >Brokebob wrote:
> > >> >
> > >> >> I would appreciate someone looking up the filament currents for a 12A6
> > >> and
> > >> >> 12SN7 Pease e-mail currents direct to
> > >> >>
> > >> >> brokebob@aol.com
> > >> >>
> > >> >> Thanks
> > >> >
> > >
> >
> >
> >
> >

183. I need an SK410 Socket.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <855o5b$295$1@newsg3.svr.pol.co.uk>
Source record: 64386

Anyone have an SK410 Eimac air system socket to sell ??
Robin G3LBA

184. FS:Amplifiers, Test gear, Tubes, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <3876687F.4FFAE46@carroll.com>
Source record: 64387
Cross-posted to: rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

All prices plus shipping from 07657.

1.) Pair of Bogen MO-100 monoblocks. These are the early version that uses 6550's, rather than 8417's. With mounting rack. 100 watts/channel tube power amps. Sound great--recently rebuilt (3 months ago) with modern electrolytics and Svetlana 6550C tubes. $400 for the pair.

2.) Oregon Electronics vacuum tube regulated power supply. Model 5-3. 0-500 V @ 500 mA adjustable HV. 0-150 Bias. Dual 6.3 V/10A filament outputs. Volt/amp meters. A great testbench supply! Uses 4 Amperex 807 tubes as pass regulators. $150

4.) Good, used, tested Telefunken smooth plate ECC83/12AX7. Pulls from test equipment. $15 each

5.) Good, used, tested Amperex ECC88/6DJ8 "Bugle Boy". Pulls from test equipment. $15 each

6.) RCA 810 triode. JAN type CRC-810. Pull from unused equipment. $40 --With Johnson socket and Triad F-33U filament tranny $55

7.) Penta Labs PL-254W Triode. Pull from unused equipment. $25

8.) 2 pcs 4E27A/5-125B pentodes. 1 Eimac, 1 Sylvania. Both are NOS, but Eimac box is missing. $30 each or $50 for the pair.

9.) Westinghouse 5CX1500A pentode. Pull from working equipment. Tube tests good. $75

10.) RCA radiotron UV-201A Used, tests good. Brass base early triode. With bakelite "breadboard" socket. $30

11.)Modified Techron 8521 power amp in roll-around 19" EIA rack. Can deliver
over 5kW into a 2 ohm load. Frequency response DC-50kHz. +/-140V output.

Unit was a pull from an MRI scanner, and has been modified to operate from single phase 208-240 VAC power. All modifications professionally done. (Original xfmr, filters, rectifier removed, and replaced with fully rated single phase equivalents) Possible uses:

Motor driver
ELF transmitter
Shake/vibration testing
Stadium/Concert hall PA system
General scientific research

Or use it as the biggest subwoofer amp on the block! Just the thing to wake the neighbors early on xmas day! :)
Best offer over $750 takes it. Unit is located in Northern NJ, and will deliver within 50 mile radius, or you can pick it up. This thing is HEAVY, but will ship via truck if desired (at buyers expense for shipping and crating).

12.) General Radio (manufactured by Tektronix) X-Y display scope. Great for checking phase shift, plotting output of a curve tracer, or just hooking up to your system for the "trippy" lissajou display.:) Great condition--VERY bright CRT with no burns. $35

13.) HP 651A Audio Oscillator. 10Hz-10MHz sine wave. 19" Rack Mountable Good condition. $75

14.) Boonton Radio (HP) 202H RF generator 54-216 MHz AM/FM Rack Mount Good condition $50

15.) Tektronix R5103 oscilloscope. Mainframe is in good working condition. Accepts all 5000 series plugins. Comes with 5A16 dual trace amp and 5B10 timebase. Plugins need work. $25

16.) A bunch of NOS tubes. Mostly RCA, GE, Sylvania. Many industrial types.Want to sell them as a lot. $300 for the lot (189 pcs) Types and quantities as follows:

0C3--2
1B3GT--1
1G3GT/1B3GT--2
1R5--1
1X2B--1
3V4--1
5R4GY--1
5R4GYB--7
5U4G--1
5U4GB--3
5V4G--1
5Y3GT--1
6A7--3
6AB4--2
6AC7--2
6AG5--3
6AH6--2
6AK5--1
6AT6--1
6AU6--3
6AU6A--5
6AY3B/6BS3--1
6BA6--1
6BC5--1
6BE6--1
6BG6GA--2
6BJ6--1

6BL8--1
6CW4--1
6J6--4
6K6GT--2
6L6--4
6L6GC-1
6SA7--1
6SH7--2
6SJ7--2
6SL7GT--3
6SN7GTB--4
6T8--2
6U5--1
6V4/EZ80--1
6V6GT--2
6W4GT--1
6X4--1
6X5GT--1
12AT7/ECC81--1
12AU6--1
12AU7--1
12AX7/ECC83--10
12BA6--2
12BH7--1
12FQ7--1
12SK7--2
12SQ7GT--1
14A7--1
14B6--1
14C7--2
14Q7--2
19T8--1
25Z5--1
29KQ6--1
35A5--1
35C5--1
35Z5GT--1
43--1
78--1
80--3
115NO30--1
CK533AX--1
CK534AX--2
1619--1
5654--3
CK5702--3
CK5704--2
CK5889--1
CK6088--1
CK6418--7

7984--10
8106--24
ECH42--1
EF42--1
VR-75--3
VR-150--3
QQE06-40--1
UF42--2

Thanks for the Bandwidth...
Bob Weiss N2IXK

185. Re: Crystal Ladder Filter Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-07 00:00:00 UTC
From: Jim Pennell <no-spam@spam.com>
Message-ID: <856dngvhf1@nntp6.atl.mindspring.net>
Source record: 64388

The Hayward article is included in an ARRL book "QRP CLASSICS" and I believe it can still be ordered from ARRL.

I also see it is in the ARRL book "W1FB's DESIGN NOTEBOOK" and this is probably the better book to get, since it includes several other articles on crystal filter designs, and methods of measuring the crystals.

As for QEX, there is a CDROM which ARRL has wiht issues from 1981 to 1998.

I've built a ladder filter for 5.0000 MHz - CW bandwdth, and it was amazingly simple.

Good luck, Jim Pennell
N6BIU

186. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: rsommers@coredcs.COM
Message-ID: <Pine.LNX.4.21.0001072357160.22059-100000@chaos.coredcs.com>
Source record: 64294

```
just a test
Been on the list awhile but no mail
Ray, WB9LKC
```

187. Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: wa2ise@netcom.com
Message-ID: <856o8deef1@nntp4.atl.mindspring.net>
Source record: 64295
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

Well, with the new R&O changes, I'm studying the question pools to get the CSCEs for my extra (I have 5wpm, and general theory already done as I have a pre 1987 tech). Think I know enough to pass, but I can't seem to calculate correctly "Q" given the frequency, inductance, and resistance of a circuit.

I *thought* the equasion for the reactance of an inductance is:

Xl = 2pi*f*L

and the equasion for Q:

Q = X/r

Combined:

Q = (2 pi *f*L)/r

Which yields wrong answers! :-(

What did I screw up?

188. Swept Frequency Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: "Carel Mulder (PA0CMU)" <cmulder@casema.net>
Message-ID: <38770D09.FACA2265@casema.net>
Source record: 64296
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.hf

Hi groups,

After the article from Wes Hayward, W7ZOI about designing crystal ladder filters, I am now searching for a copy of an article from Randy Henserson WI5W titled: "A swept Frequency Generator" written in QEX March 1994. A brief version is in the ARRL Handbook 1995, chapter 16. I own this book but maybe the original article has additional information. I'm not a member of ARRL, so cannot order a copy there.

Can anyone pass me a copy?

73 Carel, PA0CMU.

189. Re: Swept Frequency Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: Harke Smits <harke.smits@net.hcc.nl>
Message-ID: <3877167F.2A1D69A7@net.hcc.nl>
Source record: 64297
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.hf

Carel,

Er is een CD ROM met alle artikelen van QEX. (Heb ik besteld)
Met vriendelijke groet,

Harke

(staat er ook eens een Ned talige bericht op deze nieuwsgroep of is dat
tegen de etikette?)

"Carel Mulder (PA0CMU)" wrote:

> Hi groups,
>
> After the article from Wes Hayward, W7ZOI about designing crystal ladder
> filters, I am now searching for a copy of an article from Randy
> Henserson WI5W titled: "A swept Frequency Generator" written in QEX
> March 1994. A brief version is in the ARRL Handbook 1995, chapter 16. I
> own this book but maybe the original article has additional information.
> I'm not a member of ARRL, so cannot order a copy there.
>
> Can anyone pass me a copy?
>
> 73 Carel, PA0CMU.

190. Re: Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <857dv1$8fe$1@bgtnsc01.worldnet.att.net>
Source record: 64298
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

I don't see a problem, What is the question with the actual values
of F,L, and R ?
Include the possible answers.

Mike Knowlton
Panama City Fl.

191. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000108095157.24751.00000381@nso-ba.aol.com>
Source record: 64299

In article <387353BB.E8708C7D@concentric.net>, Jim <jdport@concentric.net>
writes:

>12A6: 12.6 Volts @ .5 Amps (500 mA)
>

The above is incorrect.

The heater current for a 12A6 is 0.15 A (150 mA) @ 12.6V

73 de Jim, N2EY

192. T Power Connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: guido@mail.icongrp.com
Message-ID: <38775a94.2579200@news.comnetcom.net>
Source record: 64300

Does anyone have a source / part number for the power connector plug for the FT8100R? This is a ham dual band mobile, but the power connector (a T type quick disconnect) is used by almost all the major brands for the VHF/UHF rigs.

It is possible to purchase additional power cables, for a large nominal fee, but would like to find a source for the connector only so that I would custom make what I need.

TNX in advance for the response.

193. Re: Winding Transformers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: Peter Lawton <peter_john.lawton@virgin.net>
Message-ID: <38775716.1D43@virgin.net>
Source record: 64301

In the UK I think it was RS or perhaps Maplins who used to do a wind
your own
mains transformer kit, in various power ratings. The primary is
pre-wound and
you just wrap round the requisite secondary turns. They give you data on
this. I built one and it still works. Predicted output e.m.f. not too
far
from the eventual result.

Randall D. DuCharme wrote:
>
> Greetings,
>
> I'm wondering if anyone knows of a place to purchase transformer winding
> components (bobbins, iron, magnet wire, etc) and knows of a good
> technical reference that covers winding of ones own transformers
> (modulation, plate, filament, etc) for tube stuff.
>
> Thanks in advance!
>
> --
> Randall D DuCharme Proud to be 100% Microsoft Free!
>
> Unsolicited commercial email (SPAM) received at this email address
> will not be tolerated. All spam is subject to a $200 per incident
> processing fee and possible legal action pursuant to federal
> regulations.

194. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: maddog@io.com
Message-ID: <3877aa86.53434980@news.io.com>
Source record: 64302

On Mon, 3 Jan 2000 12:40:18 -0600, "JC Quinn" <kc4ee@sonet.net> wrote:

>How about Ten Tec? They have QRP Xcievers for 20, 30,40 & 80 meters....3
>watts out. See
>http://www.tentec.com for details. Price is $95 US.

I'm with Jim on this one... great performance for under $100... I
built my 40 meter version the weekend before field day 99 and then
gave it quite a workout during field day. With a 12 V, 7AH gel-cell,
it had about 3-3.5 watts out to a 40 meter portable inverted vee... I
made 170 contacts in 18 hours. Field day is a good test of receiver
dynamic range and selectivity, and the receiver in this one did a
great job!

73,
monty N5FC

195. Re: Swept Frequency Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0801001742370001@usrh-6-96.hip.cam.org>
Source record: 64303
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.hf

In article <38770D09.FACA2265@casema.net>, "Carel Mulder (PA0CMU)"
<cmulder@casema.net> wrote:

> Hi groups,
>
>
> After the article from Wes Hayward, W7ZOI about designing crystal ladder
> filters, I am now searching for a copy of an article from Randy
> Henserson WI5W titled: "A swept Frequency Generator" written in QEX
> March 1994. A brief version is in the ARRL Handbook 1995, chapter 16. I
> own this book but maybe the original article has additional information.
> I'm not a member of ARRL, so cannot order a copy there.
>
> Can anyone pass me a copy?
>
> 73 Carel, PA0CMU.

Unless things have changed, you can get back issues of QST, or photocopies
of specific articles if the issue is no longer available, from the ARRL.
You'd have to pay for the issue, or the photocopying, but there never used
to be a restriction on who could take advantage of this.

This is why I don't quite understand the ARRL's policy of making the
cumulative index of QST on the web for members only' it is helpful
to everyone and could indeed help to sell back issues.

On the other hand, b eing in Canada I have a slight idea of what it's
like to deal across a border, in another currency, so hopefully in
this case you can find someone who has the article.

I've enver seent he article in question, but yes, I'm under the impression
that sometimes articles are shortened a bit when they are put into
the Handbook.

Michael VE2BVW

196. skematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: paley <paley33@hotmail.com>
Message-ID: <023a5bf4.41d45bee@usw-ex0101-003.remarq.com>
Source record: 64304

Where can i find skematics for my Kenwood detachable face CD player?

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

197. skematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: paley <paley33@hotmail.com>
Message-ID: <0f5b83e7.40c73f12@usw-ex0101-003.remarq.com>
Source record: 64305

Where can I find skematics for my Kenwood detachable CD player.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

198. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <8561lb$r0t$1@news1.exit109.com>
Source record: 64389

A simple solution would be to float a 7 ampHour 12 volt Gel Cell
of a 3 Amp 13.8 volt regulated supply. This could easily give you 20
or 50 amps for short(or long -10s of minutes) transmits while still being
small and cheap to build.

I plan to build something like this myself for the ten-tec 555

73s

Nick wrote in message <6pr47s0ungennisc547vf8gjlfff92gp87@4ax.com>...
>
>
>>>>
>>>
>>>I run an EMC test house and can vouch for the fact that it is VERY
difficult to
>>>suppress a switcher to co-exist with a receiver.
>>>
>>>It would be possible thought to build a small analogue PSU to run the rig
on
>>>receive with a switcher to take over on Tx.
>>>
>>>It would have to be synchronised with the PTT and start up almost
instantly but
>>>that would not be impossible.
>>I refer you to John's answer above.
>
>On Mon, 3 Jan 2000 18:49:58 +0000, phil <phil@invest.fsbusiness.co.uk>
wrote:
>>Somebody also better tell Icom that.
>
>
>I did not say it was impossible with professional facilities. I just said
it was
>VERY DIFFICULT.
>
>I believe the average amateur (who may well be a competent constructor
>otherwise) would have the knowledge, expertise, or facilities to design
this
>small radio transmitter called a SMPSU in such a way that it does not cause
>problems to receivers.
>
>I KNOW from practical experience what is needed, it is NOT EASY.
>
>Most of our customers cannot do it first time.

>
>Nick

199. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <8561bdqit1@news1.exit109.com>
Source record: 64390

hi ,

good job with the 12a6.

Now you can build a small Xtal transmitter for 80M band
and play with it.

Jim wrote in message <38765791.E69F85C4@concentric.net>...
>Well, that's what I get for being helpful and looking up data in the
Handbook for
>someone.
>My 1944 ARRL handbook must be mistaken, as it plainly states 500 mA for the
12A6
>at 12.6 volts...
>However, I have conclusive proof of the current drain. Unlike you guys, I
found a
>NIB 12A6 (RCA) and
>applied 12.6 VDC to the filament (pins 2 and 7), and the MEASURED current
drain
>is..... 153 mA.
>So there.
>Jim W5AOX
>
>Clifford Buttschardt wrote:
>
>> The 12A6 has a 150 ma heater. Almost all the 12xx7 series of tubes have
>> 150 ma heater EXCEPT the 12SN7. It has a 300 ma heater. Cliff K7RR
>>
>> On Fri, 7 Jan 2000, abcd1234 wrote:
>>
>> > hi jim,
>> >
>> > 12a6 is used in some series string hallicrafter radios of the 1950s
>> > with tubes like 12sk7 12sq7 etc, so it is pretty likely to be 0.15 Amp
>> >
>> >
>> > Jim wrote in message <3874B3FE.6E268008@concentric.net>...
>> > >Sorry, I just write 'em as I read 'em outa the handbook... And I
>> > >double-checked to make sure.
>> > >Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A,
just
>> > >below 12A6 in my manual)
>> > >My only other reference is a 1970 ARRL handbook, which no longer lists
>> > tubes
>> > >that old.

>> > >If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
>> > >misprint.
>> > >
>> > >abcd1234 wrote:
>> > >
>> > >> sir
>> > >>
>> > >> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)
>> > >> from ARRL HB 1956
>> > >>
>> > >> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
>> > >> >12A6: 12.6 Volts @ .5 Amps (500 mA)
>> > >> >12SN7: 12.6 "" @ .3 Amps (300 mA)
>> > >> >(From the 1947 ARRL handbook)
>> > >> >Jim W5AOX
>> > >> >
>> > >> >Brokebob wrote:
>> > >> >
>> > >> >> I would appreciate someone looking up the filament currents for a
12A6
>> > >> and
>> > >> >> 12SN7 Pease e-mail currents direct to
>> > >> >>
>> > >> >> brokebob@aol.com
>> > >> >>
>> > >> >> Thanks
>> > >> >
>> > >
>> >
>> >
>> >
>> >
>

200. Re: 13.5V, 20A switch-mode PS to build??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <8561nl$r0v$1@news1.exit109.com>
Source record: 64391

A simple solution would be to float a 7 ampHour 12 volt Gel Cell
of a 3 Amp 13.8 volt regulated supply. This could easily give you 20
or 50 amps for short(or long -10s of minutes) transmits while still being
small and cheap to build.

I plan to build something like this myself for the ten-tec 555

73s

Nick wrote in message <6pr47s0ungennisc547vf8gjlfff92gp87@4ax.com>...
>
>
>>>>
>>>
>>>I run an EMC test house and can vouch for the fact that it is VERY
difficult to
>>>suppress a switcher to co-exist with a receiver.
>>>
>>>It would be possible thought to build a small analogue PSU to run the rig
on
>>>receive with a switcher to take over on Tx.
>>>
>>>It would have to be synchronised with the PTT and start up almost
instantly but
>>>that would not be impossible.
>>I refer you to John's answer above.
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>On Mon, 3 Jan 2000 18:49:58 +0000, phil <phil@invest.fsbusiness.co.uk>
wrote:
>>Somebody also better tell Icom that.
>
>
>I did not say it was impossible with professional facilities. I just said
it was
>VERY DIFFICULT.
>
>I believe the average amateur (who may well be a competent constructor
>otherwise) would have the knowledge, expertise, or facilities to design
this
>small radio transmitter called a SMPSU in such a way that it does not cause
>problems to receivers.
>
>I KNOW from practical experience what is needed, it is NOT EASY.
>
>Most of our customers cannot do it first time.

>
>Nick

201. Re: Tube specs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: Tom Woodrow <tomwoodrow@internetconnect.net>
Message-ID: <3876A750.84E121A3@internetconnect.net>
Source record: 64392

Remember, no good deed goes un-punished.

Jim wrote:
>
> Well, that's what I get for being helpful and looking up data in the Handbook for
> someone.
> My 1944 ARRL handbook must be mistaken, as it plainly states 500 mA for the 12A6
> at 12.6 volts...
> However, I have conclusive proof of the current drain. Unlike you guys, I found a
> NIB 12A6 (RCA) and
> applied 12.6 VDC to the filament (pins 2 and 7), and the MEASURED current drain
> is..... 153 mA.
> So there.
> Jim W5AOX
>
> Clifford Buttschardt wrote:
>
> > The 12A6 has a 150 ma heater. Almost all the 12xx7 series of tubes have
> > 150 ma heater EXCEPT the 12SN7. It has a 300 ma heater. Cliff K7RR
> >
> > On Fri, 7 Jan 2000, abcd1234 wrote:
> >
> > > hi jim,
> > >
> > > 12a6 is used in some series string hallicrafter radios of the 1950s
> > > with tubes like 12sk7 12sq7 etc, so it is pretty likely to be 0.15 Amp
> > >
> > >
> > > Jim wrote in message <3874B3FE.6E268008@concentric.net>...
> > > >Sorry, I just write 'em as I read 'em outa the handbook... And I
> > > >double-checked to make sure.
> > > >Sure YOU aren't looking at the 12A8 ratings? (which are 12.6 @ .15A, just
> > > >below 12A6 in my manual)
> > > >My only other reference is a 1970 ARRL handbook, which no longer lists
> > > tubes
> > > >that old.
> > > >If I'm wrong, blame the ARRL staff in 1944, not me. It may well be a
> > > >misprint.
> > > >
> > > >abcd1234 wrote:
> > > >
> > > >> sir
> > > >>
> > > >> 12a6 is 12.6 volts and 0.15 amps(*NOT* 0.5 amps)

> > > >> from ARRL HB 1956
> > > >>
> > > >> Jim wrote in message <387353BB.E8708C7D@concentric.net>...
> > > >> >12A6: 12.6 Volts @ .5 Amps (500 mA)
> > > >> >12SN7: 12.6 "" @ .3 Amps (300 mA)
> > > >> >(From the 1947 ARRL handbook)
> > > >> >Jim W5AOX
> > > >> >
> > > >> >Brokebob wrote:
> > > >> >
> > > >> >> I would appreciate someone looking up the filament currents for a 12A6
> > > >> and
> > > >> >> 12SN7 Pease e-mail currents direct to
> > > >> >>
> > > >> >> brokebob@aol.com
> > > >> >>
> > > >> >> Thanks
> > > >> >
> > > >
> > >
> > >
> > >
> > >

202. FA: Power Supply Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-08 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <r1zd4.52$en6.3728@server2.news.adelphia.net>
Source record: 64393
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,rec.radio.swap

Power Supply Transformer

Paeco model 4026. Dual primary winding for 115 or 230 volts. Secondary windings are as follows... 920 VCT at 100 mA, 5 V at 2 A, 5 V at 6 A, 6.3 V at 8 A, 6.3 V at 6 A, and 6.3 V at 6 A. All connections are via solder posts on a terminal strip. Mounting is via 4 bolts which are included. I checked all the windings with an ohm meter and they check out OK

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232503652

203. Re: Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: W6RCecilA <Cecil.A.Moore@IEEE.org>
Message-ID: <387904FA.64DE1C1F@IEEE.org>
Source record: 64244
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

randas@mindspring.com wrote:
> Why bother learning electronics...just wait till the FCC drops the
> requirement to learn it.

One might have to wait a mighty long time.
--
73, Cecil, W6RCA http://www.mindspring.com/~w6rca

204. Callbook Listings Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: redberd95@aol.comnospam
Message-ID: <20000109174332.03572.00001341@ng-fx1.aol.com>
Source record: 64245

I am looking for photocopies of my callbook listings from 1979-1999. The call is KA4NMA. Please respond to both rdav@truck.ds.adp.com and redberd95@aol.com.

Randy KA4NMA

205. Callbook Listing Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: redberd95@aol.comnospam
Message-ID: <20000109174433.03572.00001342@ng-fx1.aol.com>
Source record: 64246

I am looking for photocopies of my callbook listings from 1979-1999. The call is KA4NMA. Please respond to both rdav@truck.ds.adp.com and redberd95@aol.com.

Randy KA4NMA

206. Re: Homebrew 6 meter mobile ant.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: gordon <charlesward1NOchSPAM@yahoo.com.invalid>
Message-ID: <1e2537bb.36f28185@usw-ex0110-075.remarq.com>
Source record: 64247

i have a hembro dual band antenna for 2m and 70cm and guess
what , it tunes up as a 1/4 wave on 6m, so its a tri
bander. look out for it

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

207. Re: FS: DEC 8K x 18 core memory board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000108202608.03570.00001058@ng-fx1.aol.com>
Source record: 64306

Man, I'm broke and have all the "tax deduction" I need...but thanks for the suggestion!

;-)

208. FS: Stancor power transformers, NIB

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000108202634.03570.00001060@ng-fx1.aol.com>
Source record: 64307

I am selling a few Stancor power transformers, new in box, part number P-8365. Primary is 117 V. Secondaries are;

570 VCT (285-0-285) at 325 Ma DC
5.0 V at 6 A
12.6 VCT at 6A

The HV secondary is WAY beefier than anything in the AES catalog. And that's 400 VDC on B+, if you use a full wave SS rectifier circuit, or 800 VDC if you use a full wave bridge and ignore the center tap. (Obviously, lower B+ if you use a tube rectifier.)

SO WHAT if there's the filament secondary is 12.6 V! Just use half of that secondary for 6.3 V, and use a pair of resistors to ground to get the CT. OR you can use some 12 V variant "budget" tubes. I guess you could even use the 5 V secondary to run some 6 V tubes (or 5 volt variants).

There's a lot of different options for this transformer...just use a little imagination.

Asking $45, plus shipping (9.5 pounds).

Interested? Please respond by email to < OvrReactor@aol.com >.

Best Regards,
Tom Mitchell

209. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <oLQd4.5800$%K1.281595@tw12.nn.bcandid.com>
Source record: 64308

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

210. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <7QQd4.5806$%K1.282318@tw12.nn.bcandid.com>
Source record: 64309

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

211. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <hSQd4.5813$%K1.281997@tw12.nn.bcandid.com>
Source record: 64310

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable, regulated power supply with adjustable current (approx. 0-2.5A) and metered power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

212. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <PQQd4.5807$%K1.282058@tw12.nn.bcandid.com>
Source record: 64311

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

213. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <aRQd4.5809$%K1.282414@tw12.nn.bcandid.com>
Source record: 64312

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

214. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <vSQd4.5815$%K1.282586@tw12.nn.bcandid.com>
Source record: 64313

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

215. Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <wUQd4.5817$%K1.279218@tw12.nn.bcandid.com>
Source record: 64314

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

Jeff Weinberg W8CQ
w8cq@comsys.net

216. Bench Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <saSd4.5929$%K1.291031@tw12.nn.bcandid.com>
Source record: 64315

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

--
Jeff Weinberg W8CQ
w8cq@comsys.net

217. Bench Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <QbSd4.5933$%K1.291032@tw12.nn.bcandid.com>
Source record: 64316

Hi All,
Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
regulated power supply with adjustable current (approx. 0-2.5A) and metered
power supply.

Thanks,

--
Jeff Weinberg W8CQ
w8cq@comsys.net

218. Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cq@comsys.net>
Message-ID: <5ATd4.6133$%K1.300083@tw12.nn.bcandid.com>
Source record: 64317

Hi All,
Sorry about the multiple post. My news server lost its mind.

--
Jeff Weinberg W8CQ
w8cq@comsys.net

219. Re: 136kHz operation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Andy <ve1vvv@rac.ca>
Message-ID: <jHTd4.3239$o61.163263@sapphire.mtt.net>
Source record: 64318

You could listen for CFH at 136 Khz.. 5-8 KW 24 and 7...Nova Scotia, Canada

C Andersson <sm6pxj@hotmail.com> wrote in message
news:kK5c4.2671$yn3.5519@nntpserver.swip.net...
> >Still haven't heard a thing up in JP53 :-(
> >--Magne / la1bfa
>
> I'm often qrv weekdays around 21.30 UTC.
>
> /Christer
> sm6pxj
>
>
>

220. FA: Power Supply Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <%iUd4.131$en6.71842@server2.news.adelphia.net>
Source record: 64319
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

Paeco model 4026. Dual primary winding for 115 or 230 volts. Secondary windings are as follows... 920 VCT at 100 mA, 5 V at 2 A, 5 V at 6 A, 6.3 V at 8 A, 6.3 V at 6 A, and 6.3 V at 6 A. All connections are via solder posts on a terminal strip. Mounting is via 4 bolts which are included. I checked all the windings with an ohm meter and they check out OK.

No Reserve

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232503652

221. FA: Digital Multimeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <hmUd4.133$en6.71904@server2.news.adelphia.net>
Source record: 64320
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

Sinclair model DM 350 multimeter. Measures AC and DC voltage from 1 mV to 1200 volts, current from 1 microA to 2 A, and resistance from 1 ohm to 20 megohms. 3 1/2 digit LED display. Banana input jacks. Powered by wall transformer (included) or 4 size C cells. Works great.

No Reserve

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232526164

222. FA: 6BA8-A Vacuum Tubes - RCA - 5 pieces - NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <mgUd4.129$en6.71920@server2.news.adelphia.net>
Source record: 64321
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

5 pieces of new RCA 6BA8-A vaccum tubes in original package.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=229769522

223. FA: Digital Voltmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <1oUd4.134$en6.71874@server2.news.adelphia.net>
Source record: 64322
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,sci.electronics.equipment

This is a digital panel meter manufactured by Digitec. It measures DC voltage, and uses 4 miniature nixie tubes to display the reading. It is powered directly by 110 VAC, which is applied to the rear panel. The voltage to be measured is also applied to the rear panel. The two screwdriver adjustments on the front panel are for gain and offset. It works well...the third picture shows the reading from a 9V transistor battery.

No Reserve

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232540206

224. FA: RG 8/U Coaxial Cable - 100 ft. - NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <RkUd4.132$en6.71960@server2.news.adelphia.net>
Source record: 64323
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.swap

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232510363

225. question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <XyUd4.11941$7L.487774@tw11.nn.bcandid.com>
Source record: 64324

i have a 74LS04 in the classic two gate oscillator circuit. i am using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates into a semi linear area. pin 2 is connected to pin 3, and the crystal with a 12pf capacitor in series is connected from pin 4 back to pin to complete the ring oscillator.

Now here is the question, the xtal (a small hc/49 style) is supposed to be a third overtone cut, but it insists on running at the 9 mhz fundamental. anyone have any tricks to kick it, and keep it in the 10 meter band? i could build a tripler, but that would defeat the original design goal.

tnx 73

226. Re: DEC 8K x 18 core memory board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8597mc$d5p@nnrp3.farm.idt.net>
Source record: 64325

"OvrReactor" <ovrreactor@aol.com-nospam> wrote in message
news:20000106133012.25617.00000082@ng-fn1.aol.com...
> Yeah, I know it's off topic, but I thought some wire-head like me would
think
> this would be a cool collectors piece (I have two, and I want to sell the
> "extra").

What did you pull it out of? An old DEC PDP-8, or PDP-11 mini? You mite want to post this on some of the electronics and computer equipment news groups. There are some people out there who collect old computers, and if the core memory boards you have work they maybe of great interest to somebody trying to restore one of these old machines.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse Code is used exclusively by Electronics Based life forms to communicate amongst themselves using advanced Organic Digital Signal Processors, running state of the art Artificial Intelligence Software, to perform the highly complex transmit encryption, receive decryption and error correction functions."

227. Re: Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <85975p$d23@nnrp3.farm.idt.net>
Source record: 64326
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

"Robert Casey" <wa2ise@netcom.com> wrote in message
news:856o8deef1@nntp4.atl.mindspring.net...
> Well, with the new R&O changes, I'm studying the question pools to get the
> CSCEs for my extra (I have 5wpm, and general theory already done as I have
a
> pre 1987 tech). Think I know enough to pass, but I can't seem to
calculate
> correctly "Q" given the frequency, inductance, and resistance of a
circuit.
>
> I *thought* the equasion for the reactance of an inductance is:
>
> Xl = 2pi*f*L
>
> and the equasion for Q:
>
> Q = X/r
>
> Combined:
>
> Q = (2 pi *f*L)/r
>
> Which yields wrong answers! :-(
>
> What did I screw up?

It makes a difference if the circuit in question is a parallel or series
circuit. The equations you used are correct for a series connection of a
resistor and an inductance. For a parallel connection the equation is
different.

For a parallel connection of X and R you get:

Z=1/[(1/R)+(1/X*i)] where i=sqrt(-1) and X=2*Pi*F*L

Z=[(R*X^2)/(X^2+R^2)]+i*[(R^2*X)/(X^2+R^2)]

Now the part multiplied by "i" is the equivalent inductive reactance (Xeq)
of the parallel circuit, and the remaining part is the equivalent resistive
(Req) part.

The Q is still calculated by X/R, but in the parallel case it is Xeq/Req,
which yields
R/X, for the paralleled inductive reactance and resistance.

You can also look up the above equation (#15) in the 1999 ARRL HB on page 13.5.

Good luck on your exam!
--
73's,

Leland C. Scott
KC8LDO
(Just another dumb No-Code Tech "Elmering" another almost-Extra)

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse Code is used exclusively by Electronics Based life forms to communicate amongst themselves using advanced Organic Digital Signal Processors, running state of the art Artificial Intelligence Software, to perform the highly complex transmit encryption, receive decryption and error correction functions."

228. WTD: Signalcrafters 30 RF Coupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: W5IDX <W5IDX@worldnet.att.net>
Message-ID: <859gvncfg1@bgtnsc02.worldnet.att.net>
Source record: 64327
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Any One Have A Spare RF Coupler For The Signalcrafters Model 30 Watt/Swr Meter.

Thanks W5IDX@worldnet.att.net

229. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38782A15.3E8F@pop.removethistomailme.net>
Source record: 64328

gudmundur wrote:
>
> i have a 74LS04 in the classic two gate oscillator circuit. i am
> using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates
> into a semi linear area. pin 2 is connected to pin 3, and the crystal
> with a 12pf capacitor in series is connected from pin 4 back to pin
> to complete the ring oscillator.
>
> Now here is the question, the xtal (a small hc/49 style) is supposed
> to be a third overtone cut, but it insists on running at the 9 mhz
> fundamental. anyone have any tricks to kick it, and keep it in the
> 10 meter band? i could build a tripler, but that would defeat the
> original design goal.
>
> tnx 73

Try a 74HC part? The gain of an LS part probably drops off too rapidly
near 30 MHz.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

230. WTB: Desoldering station with vac. pump built in.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: ghopper@eskimo.com
Message-ID: <ghopper-0901000139420001@10-076.009.popsite.net>
Source record: 64329
Cross-posted to: rec.radio.swap,alt.ham-radio.marketplace,rec.radio.amateur.swap,rec.ham-radio.swap,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.scanner,alt.radio.scanner

I'm looking to buy a desoldering station with the vacuum pump built in.
I'd prefer a Pace or Hokka system but will consider all offers. Please
respond directly to me at ghopper@eskimo.com

Thanks

--
G.F. Hopper
KB7WSD

"Remember, you can always quit before it gets really bad."
-

231. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Paul DeFelice <k9nu@prairienet.com>
Message-ID: <387874CB.4C1D6B52@prairienet.com>
Source record: 64330

Gate oscillators don't make reliable 3rd overtone oscillators without some type of fundamental mode trap in the loop. You might be able to replace the 12 pf cap with a parallel resonant tank. The tank should be resonant slightly above 9 MHz (say 12 to 15 MHz) and have an equivalent "c" of 12 pf at 28 MHz. You may have to add a dc blocking cap in series with the tank, depending on your circuit.

gudmundur wrote:
>
> i have a 74LS04 in the classic two gate oscillator circuit. i am
> using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates
> into a semi linear area. pin 2 is connected to pin 3, and the crystal
> with a 12pf capacitor in series is connected from pin 4 back to pin
> to complete the ring oscillator.
>
> Now here is the question, the xtal (a small hc/49 style) is supposed
> to be a third overtone cut, but it insists on running at the 9 mhz
> fundamental. anyone have any tricks to kick it, and keep it in the
> 10 meter band? i could build a tripler, but that would defeat the
> original design goal.
>
> tnx 73

232. Which Microwave Band?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Brad Dyson <n4trc@prodigy.net>
Message-ID: <85a0r8$1340$1@newssvr04-int.news.prodigy.com>
Source record: 64331

I am considering which Microwave band that I want to start out experimentations with. Here is some of the criterion that I am considering:

-Kit availability

-# of operators in that band

-Flexibility of equipment- can I do other modes (FSTV, Spread spectrum, etc)

-how soon the FCC will give it up to commercial interests:
My impressions say that 902, 1.2Ghz, 2 Ghz, 3 Ghz, 5.7 Ghz will go to various commercial uses just as soon as the FCC 'discovers' that that RF safety loophole extends further than they originally planned (take a look at their figures NOW, it progresses almost linearly with frequency until it hits about 800 Mhz or so, and then 'magically' RF there becomes a little 'safer' for cell phones). We will have the opportunity to shower our heads with RF from phones operating as high as 3Ghz, I figure (any opinions on this are welcome).

I read not too long ago that certain bands between 2 and 10Ghz are already being considered for satellite-based continuous music programming pumped into cars, as well as more TV, phone use, etc. Which band might be the most immune to this trend, and why (propagation limitations, equipment availability, etc)?

Which highest microwave band (and supportive technology) might allow one to more readily generate a Spread spectrum signal? Is it TECHNICALLY possible to do that? How well can a signal be 'hidden' with such an approach?

n4trc@prodigy.net

233. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <85a50k$s4s$1@plutonium.btinternet.com>
Source record: 64332

Try reducing the value of the 12 pF capacitor. Replace it with a 10 pF preset.

234. Re: Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3878C539.80064040@home.com>
Source record: 64333

You can use two LM317's - one as a voltage regulator, the other as a current regulator. See Nat Semi's website (www.nsc.com). To get down to "0" volts you have to "bias" the reference voltage on the voltage regulating LM317- this can be done with a band gap reference diode (or, you could just use the fact that an LM337 is exactly complementary - but it's an expensive fix.)

Jeff Weinberg W8CQ wrote:

> Hi All,
> Anyone got a schematic or source of schematic for a 0-25VDC adjustable,
> regulated power supply with adjustable current (approx. 0-2.5A) and metered
> power supply.
>
> Thanks,
>
> Jeff Weinberg W8CQ
> w8cq@comsys.net

235. WTB: Drake 1544 adaptor box

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000109100639.26393.00000879@ng-ba1.aol.com>
Source record: 64334

Need a second adaptor to complete my second TR-7 station. It allows transcieve of TR7, R7, and RV75.

73

Evan

236. WTB: 160 m link coil, BC-610?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000109103751.26405.00001158@ng-ba1.aol.com>
Source record: 64335

Interested in buying a like new 160m link coupled coil, low or preferably high power.

73

Evan

237. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0901001218280001@usrh-5-21.hip.cam.org>
Source record: 64336

In article <XyUd4.11941$7L.487774@tw11.nn.bcandid.com>,
retxeh@blazenet.net wrote:

> i have a 74LS04 in the classic two gate oscillator circuit. i am
> using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates
> into a semi linear area. pin 2 is connected to pin 3, and the crystal
> with a 12pf capacitor in series is connected from pin 4 back to pin
> to complete the ring oscillator.
>
> Now here is the question, the xtal (a small hc/49 style) is supposed
> to be a third overtone cut, but it insists on running at the 9 mhz
> fundamental. anyone have any tricks to kick it, and keep it in the
> 10 meter band? i could build a tripler, but that would defeat the
> original design goal.
>
> tnx 73

But any overtone crystal will oscillate at it's fundamental unless you
are using a circuit that specifically gets it to oscillate on it's overtone.

Rarely do you see a TTL oscillator used as an overtone oscillator. The
solution is to give up on TTL, and use a discrete transistor in an
overtone circuit.

There is a solution, but I can't remember the details. Years ago,
International Crystal had a circuit for an overtone oscillator that
was simpler than what was seen elsewhere. It had two capacitors
in series from base to ground, with the junction of the capacitors
connecteed to the emitter. That was fairly standard, though all
the other overtone oscillators had an RF choke between the emitter and
ground. Thr trick seemed to be in the value of the capacitors. I
looked at that circuit, and realized it could be translated to a TLL
oscillator. I must have needed an overtone oscillator at the time,
and wanted tokeep things TTL. YOu linearize a pair of gates, put the
crystal from the input of the first to ground. Put two capacitors in
series to ground. The output of the first gate feeds the second,
and the output of the second feeds the junction of the two capacitors.

It worked. I'm sure I must have used 470 ohm resistors as feedback
around the gates, but I sure can't remember the capacitor values. I'm
sure I used whatever values were used in the International Crystal
circuit.

I'd thought of sending the circuit into one of the ham magazines, but
I never got around to it, thinking it wasn't original enough. Some
time later, there was an article in Ham Radio with the very same circuit,

and he also dervied it from the International Crystal schematic.
I can't remember the title of the article or when it appeared (must
have been late seventies), but I think it was by Carl C. Drumeller.

Michael VE2BVW

238. B-U-I-L-D Y-O-U-R O-W-N C-A-B-L-E B-O-X..... 6236

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: zizqlc@sdfsdf.com
Message-ID: <Ju3e4.47552$J%4.49640@dfiatx1-snr1.gtei.net>
Source record: 64337
Body handling: 1 long encoded or obfuscated payload line was not displayed

LEGAL C`A`B`L`E TV D`E-S`C`R`A`M`B`L`E`R

Want to watch Sporting Events?--Movies?--Pay-Per-View??....FREE!!!!

*This is the Famous R-O Shack TV D-e-s-c-r-a-m-b-l-e-r
You can assemble it from Radio Shack parts for about $12 to $15.

We Send You:
1, E-Z To follow Assembly Instructions.
2. E-Z To read Original Drawings.
3. Total Parts List.

**** PLUS SOMETHING NEW YOU MUST HAVE! ****
Something you can't do without.

THE UP-TO-DATE 6 PAGE REPORT:
USING A D-E-S-C-R-A-M-B-L-E-R LEGALLY

Warning: You should not build a TV D-e-s-c-r-a-m-b-l-e-r
without reading this report first.

You get the complete 6 page report
and instruction package including
the instruction plans, the easy to
follow diagram, and most important
of all the "Using a D`e`s`c`r`a`m`b`l`e`r
LEGALLY Report all for just--$10.00

Fill out form below and send it,
along with your $10.00 payment to:

C.a.b.l.e.t.r.o.n FREE-TV
12187 S. Orange Blossom Trail #116
Orlando Fl 32837

(Cash, Check or Money Order.)
(Florida residents include 7% Florida State Sales Tax)
(All orders outside the U.S.A. add $5.00)

PRINT YOUR:

NAME_____

ADDRESS_____

CITY/STATE/ZIP_____

E-MAIl ADDRESS_____

rtg45t34t43t34t34t43t34t34t34t34t34t34t34

[Long encoded or obfuscated payload not displayed]

239. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Brett Holden <bcholden@bellsouth.net>
Message-ID: <Tw3e4.17360$sz4.88475@news3.atl>
Source record: 64338

Try tuning the circuit. Parallel connect 680nH and 68pF from
pin 4 to ground, but put a .01mF in the leg with the inductor, so
pin 4 is not dc grounded. That's a 0.68 microhenry and a .01mF
in series, in parallel with a 68pF from pin 4 to ground. Also add
maybe 10pF from pin one to ground. Add a small resistor, say
62 ohms between [the crystal / 680nH /68pF] and pin 4. Have
10 Megohms across the crystal? Add that. I have extrapolated
the LC values from a 36MHZ clock I used to have to fix, and
have not built your circuit. You will never get your third
overtone without some frequency steering. And without some
(expensive) synthesis software you will have to play around.
The resonant freq formula is 0.159 / sqrt (L*C). Use that on
the parallel resonant circuit components. Remember, the
moon really IS made of green cheese.

>udmundur wrote in message ...
> i have a 74LS04 in the classic two gate oscillator circuit. i am
>using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates
>into a semi linear area. pin 2 is connected to pin 3, and the crystal
>with a 12pf capacitor in series is connected from pin 4 back to pin
>to complete the ring oscillator.
>
> Now here is the question, the xtal (a small hc/49 style) is supposed
>to be a third overtone cut, but it insists on running at the 9 mhz
>fundamental. anyone have any tricks to kick it, and keep it in the
>10 meter band? i could build a tripler, but that would defeat the
>original design goal.

240. Re: Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: randas@mindspring.com
Message-ID: <85ajdbbdk1@nntp9.atl.mindspring.net>
Source record: 64339
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

Why bother learning electronics...just wait till the FCC drops the
requirement to learn it. Some people have trouble with it and its not fair
to make them feel bad.

de Tim K0FL

Leland C. Scott wrote in message <85975p$d23@nnrp3.farm.idt.net>...
>
>"Robert Casey" <wa2ise@netcom.com> wrote in message
>news:856o8deef1@nntp4.atl.mindspring.net...
>> Well, with the new R&O changes, I'm studying the question pools to get
the
>> CSCEs for my extra (I have 5wpm, and general theory already done as I
have
>a
>> pre 1987 tech). Think I know enough to pass, but I can't seem to
>calculate
>> correctly "Q" given the frequency, inductance, and resistance of a
>circuit.
>>
>> I *thought* the equasion for the reactance of an inductance is:
>>
>> Xl = 2pi*f*L
>>
>> and the equasion for Q:
>>
>> Q = X/r
>>
>> Combined:
>>
>> Q = (2 pi *f*L)/r
>>
>> Which yields wrong answers! :-(
>>
>> What did I screw up?
>
>It makes a difference if the circuit in question is a parallel or series
>circuit. The equations you used are correct for a series connection of a
>resistor and an inductance. For a parallel connection the equation is
>different.
>
>For a parallel connection of X and R you get:
>
>Z=1/[(1/R)+(1/X*i)] where i=sqrt(-1) and X=2*Pi*F*L

>
>Z=[(R*X^2)/(X^2+R^2)]+i*[(R^2*X)/(X^2+R^2)]
>
>Now the part multiplied by "i" is the equivalent inductive reactance (Xeq)
>of the parallel circuit, and the remaining part is the equivalent resistive
>(Req) part.
>
>The Q is still calculated by X/R, but in the parallel case it is Xeq/Req,
>which yields
>R/X, for the paralleled inductive reactance and resistance.
>
>You can also look up the above equation (#15) in the 1999 ARRL HB on page
>13.5.
>
>Good luck on your exam!
>--
>73's,
>
>Leland C. Scott
>KC8LDO
>(Just another dumb No-Code Tech "Elmering" another almost-Extra)
>
>ARRL member
>NCI member
>
>"You ask what Morse Code is good for? I'll tell you. Morse
>Code is used exclusively by Electronics Based life forms to
>communicate amongst themselves using advanced Organic
>Digital Signal Processors, running state of the art Artificial
>Intelligence Software, to perform the highly complex
>transmit encryption, receive decryption and error correction
>functions."
>
>
>

241. Re: Homebrew 6 meter mobile ant.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: f1dfr@my-deja.com
Message-ID: <85aqu6$p2f$1@nnrp1.deja.com>
Source record: 64340

In article <P37d4.27997$7S.49590@news20.bellglobal.com>,
"Greg" <memory1@sympatico.ca> wrote:
> Hi all ,
> Does anyone have any plans or ideas for a 6 meter vertical mobile
> antenna . I will operating the fm portion of the band in North America
.
> Thanks ,
> Greg de KC8KUG
>
>

get a COMET CA-285 mobile antenna. Length=1.32m Weight=300 g Pmax=300W
it's designed for 6m (0dB) and 2m (3.4 dB). Works fine.

73s de JM F1DFR

Sent via Deja.com http://www.deja.com/
Before you buy.

242. Re: Homebrew 6 meter mobile ant.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: f1dfr@yahoo.com
Message-ID: <85aqvc$p2m$1@nnrp1.deja.com>
Source record: 64341

In article <P37d4.27997$7S.49590@news20.bellglobal.com>,
"Greg" <memory1@sympatico.ca> wrote:
> Hi all ,
> Does anyone have any plans or ideas for a 6 meter vertical mobile
> antenna . I will operating the fm portion of the band in North America
.
> Thanks ,
> Greg de KC8KUG
>
>

get a COMET CA-285 mobile antenna. Length=1.32m Weight=300 g Pmax=300W
it's designed for 6m (0dB) and 2m (3.4 dB). Works fine.

73s de JM F1DFR

Sent via Deja.com http://www.deja.com/
Before you buy.

243. Re: Studying for extra: need equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <3878EE80.69425896@inreach.com>
Source record: 64342
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

yet another sarcastic smartass comment. Grow up and get over it.

randas@mindspring.com wrote:
>
> Why bother learning electronics...just wait till the FCC drops the
> requirement to learn it. Some people have trouble with it and its not fair
> to make them feel bad.
>
> de Tim K0FL
>
> Leland C. Scott wrote in message <85975p$d23@nnrp3.farm.idt.net>...
> >
> >"Robert Casey" <wa2ise@netcom.com> wrote in message
> >news:856o8deef1@nntp4.atl.mindspring.net...
> >> Well, with the new R&O changes, I'm studying the question pools to get
> the
> >> CSCEs for my extra (I have 5wpm, and general theory already done as I
> have
> >a
> >> pre 1987 tech). Think I know enough to pass, but I can't seem to
> >calculate
> >> correctly "Q" given the frequency, inductance, and resistance of a
> >circuit.
> >>
> >> I *thought* the equasion for the reactance of an inductance is:
> >>
> >> Xl = 2pi*f*L
> >>
> >> and the equasion for Q:
> >>
> >> Q = X/r
> >>
> >> Combined:
> >>
> >> Q = (2 pi *f*L)/r
> >>
> >> Which yields wrong answers! :-(
> >>
> >> What did I screw up?
> >
> >It makes a difference if the circuit in question is a parallel or series
> >circuit. The equations you used are correct for a series connection of a
> >resistor and an inductance. For a parallel connection the equation is

> >different.
> >
> >For a parallel connection of X and R you get:
> >
> >Z=1/[(1/R)+(1/X*i)] where i=sqrt(-1) and X=2*Pi*F*L
> >
> >Z=[(R*X^2)/(X^2+R^2)]+i*[(R^2*X)/(X^2+R^2)]
> >
> >Now the part multiplied by "i" is the equivalent inductive reactance (Xeq)
> >of the parallel circuit, and the remaining part is the equivalent resistive
> >(Req) part.
> >
> >The Q is still calculated by X/R, but in the parallel case it is Xeq/Req,
> >which yields
> >R/X, for the paralleled inductive reactance and resistance.
> >
> >You can also look up the above equation (#15) in the 1999 ARRL HB on page
> >13.5.
> >
> >Good luck on your exam!
> >--
> >73's,
> >
> >Leland C. Scott
> >KC8LDO
> >(Just another dumb No-Code Tech "Elmering" another almost-Extra)
> >
> >ARRL member
> >NCI member
> >
> >"You ask what Morse Code is good for? I'll tell you. Morse
> >Code is used exclusively by Electronics Based life forms to
> >communicate amongst themselves using advanced Organic
> >Digital Signal Processors, running state of the art Artificial
> >Intelligence Software, to perform the highly complex
> >transmit encryption, receive decryption and error correction
> >functions."
> >
> >
> >

244. Low Power Design Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-09 00:00:00 UTC
From: Duncan Walters <tesla@cwcom.net>
Message-ID: <38790397.C644F4AF@cwcom.net>
Source record: 64343

I want to build a simple no-frills basic CW transmitter for any single
HF band
40 thru 10m.
I want the design to power up from a very low D.C. voltage source (less
than 3 volts)
using just standard parts.
Has anyone out there got any circuit designs that I could use to form
the basis of
such a design, or could perhaps suggest a source of reference to such
circuits or schematics?
Any help or assistance would be greatly appreciated.
Please reply soon.
Best 73's Duncan J Walters G4DFV

245. Re: Power Supply Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3878c5d0.246682868@news.online.no>
Source record: 64248

On Sun, 09 Jan 2000 14:29:18 GMT, JW <jdwalton@home.com> wrote:

>You can use two LM317's - one as a voltage regulator, the other as a current
>regulator. See Nat Semi's website (www.nsc.com). To get down to "0" volts you
>have to "bias" the reference voltage on the voltage regulating LM317- this can
>be done with a band gap reference diode (or, you could just use the fact that
>an LM337 is exactly complementary - but it's an expensive fix.)
>
>Jeff Weinberg W8CQ wrote:
>
and always remember some extra decoupling capacitors, because the
manufacturers shows a circuit to convice economists, which does not
mean that everybody can realize the same minimum component design. It
is also a good idea to put a 0.1uF capacitor across the rectifier
bridge, particularly if you have interest to listen on 3.5MHz or lower
frequencies

JM
LA8AK

246. Re: Studying for extra: need equation for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38797DA7.EEC@pop.removethistomailme.net>
Source record: 64249
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

W6RCecilA wrote:
>
> randas@mindspring.com wrote:
> > Why bother learning electronics...just wait till the FCC drops the
> > requirement to learn it.
>
> One might have to wait a mighty long time.
> --
> 73, Cecil, W6RCA http://www.mindspring.com/~w6rca

Folks, this restructuring stuff has made for a thoroughly-enjoyable flame war, but let's keep it out of the homebrew NG, OK? This is one of the few NGs unpolluted by all the pro/anti-CW rhetoric.

The guy asked a reasonable question that indicated that he wasn't just memorizing the question pool, but wanted to understand the material. I don't see where he's going wrong myself, and I hold an honest-to-God flameproof 13-WPM Advanced ticket from 1982.

Followups set to .policy, flame away...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

247. Can Anyone Help Please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Duncan Walters <tesla@cwcom.net>
Message-ID: <3879ABAE.A8B11993@cwcom.net>
Source record: 64250

I wish to construct a simple, no-frills basic QRP CW transmitter for any single band 40 thru 10m. I want the design to run from a very low voltage D.C. power source, less than 3 volts, and to be designed around everyday discrete components.
Have any of you ever built anything like this before? I would be most intertested to hear from anyone who could help in any way, supply me with circuit ideas, schematics or perhaps suggest a source where I might be able to gather the information I need to get started.
I will be most grateful for any assistance.
Please reply soon
73 Duncan G4DFV

248. TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <387a1b97@news.marun.edu.tr>
Source record: 64251

hi
My Kenwood TS-140S is not work

Symptoms : receiver is not work , not sound
display sometime working , sometime only points
I always hear cw " UNLOCK "

I have`t circuit schema do you know any web adres for schema ?
can you help me for this error ?
73`s A. Sua TORTU TA2AD

249. Re: Can Anyone Help Please?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: "Al Lorona, Jr." <al_lorona@agilent.com>
Message-ID: <387A1EB6.1FE9@agilent.com>
Source record: 64252

Duncan Walters wrote:
>
> I wish to construct a simple, no-frills basic QRP CW transmitter for any
> single band 40 thru 10m. I want the design to run from a very low
> voltage D.C. power source, less than 3 volts, and to be designed around
> everyday discrete components.

Hi, Duncan,

There was an article in QEX in 1997 on very low-voltage (< 3V) QRP rigs.
It might be a good reference to consult. I can't remember the exact
issue, but a tour of http://www.arrl.org should turn up the article.

Good luck!

R,

Al W6LX

--

While you're passing out the spam, don't forget these guys:

admin@loopback
$LOGIN@localhost
$LOGNAME@localhost
$USER@localhost
$USER@$HOST
root@mailloop.com
Chairman William Kennard: wkennard@fcc.gov
Commissioner Susan Ness: sness@fcc.gov
Commissioner Harold Furchtgott-Roth: hfurchtg@fcc.gov
Commissioner Michael Powell: mpowell@fcc.gov
Commissioner Gloria Tristani: gtristan@fcc.gov
US Postal Service: customer@email.usps.gov
Fraud Watch: fraudinfo@psinet.com
Federal Trade Commission: consumerline@ftc.gov

250. Re: question 74LS04 as xtal osc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387A316A.7EB03EFF@agilent.com>
Source record: 64253

To the other replies I've seen, I'll add:
... Why not just use a single gate instead of a cascade of two? That cuts the delay. I use a single-gate oscillator with 74AC parts and never seem to have trouble with it oscillating (but see next paragraph). Of course, it also doesn't take as much DC feedback to get it in its linear region! Circuit is high-value feedback R, small R from gate output to xtal and a cap to gnd. Other end of xtal to gate input and another cap to gnd. Caps provide xtal load capacitance.
... Although I'd agree that an LC tank to insure oscillation on a specific overtone is very desirable, I can assure folk that it's not always necessary! I had to damp out the overtone oscillation in a 74AC fundamental mode oscillator. At least going that direction is easy and doesn't take a tuned tank.

Cheers,
Tom

gudmundur wrote:
>
> i have a 74LS04 in the classic two gate oscillator circuit. i am
> using 560 ohm resistors (pin 1 to 2, and pin 3 to 4) to bias the gates
> into a semi linear area. pin 2 is connected to pin 3, and the crystal
> with a 12pf capacitor in series is connected from pin 4 back to pin
> to complete the ring oscillator.
>
> Now here is the question, the xtal (a small hc/49 style) is supposed
> to be a third overtone cut, but it insists on running at the 9 mhz
> fundamental. anyone have any tricks to kick it, and keep it in the
> 10 meter band? i could build a tripler, but that would defeat the
> original design goal.
>
> tnx 73

251. Why put at 3.3M resistor betwen transformer pri and sec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: wsanders at netcom dot com <exsvg@my-deja.com>
Message-ID: <85dm6r$s3m$1@nnrp1.deja.com>
Source record: 64254

I was RFI-proofing this Sony 6V power supply and noticed a 3.3M resistor placed between one leg of the transformer primary and the negtive DC lead. The PS is plain old unregulated DC supply with a bridge rect and a big electrolytic.

I use a Sony 7600G radio with the supply and the radio is unstable when the (unpolarized!) plug puts the resistor on the hot side of the AC. Removing the resistor had no effect on RFI but it did get rid of the 7600G's sensitivity to the orientation of the plug.

I can think of no reason for this to be there, except possibly to bleed off static charge from the device it's plugged into. Any ideas why they would have put this in? I've never seen such a thing in an schematic.

-KF6IIU

Sent via Deja.com http://www.deja.com/
Before you buy.

252. QEX Article Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Duncan Walters <tesla@cwcom.net>
Message-ID: <387A4508.661EA850@cwcom.net>
Source record: 64255

I need a copy of an article which (I am told) appeared in QEX during
1997.
The article is about very low-voltage QRP rigs.
I have looked on the ARRL website, searched the QEX file index for 1997
without spotting anything which actually mentions QRP.
There is an article called "The Belittler" in the November issue.
Can this be what I am after?
Please can anyone help with my enquiry?
I will be most grateful for any assistance.
Please reply soon,
73 Duncan G4DFV

253. Fs Kenwood YG-455S-1 crystal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: NV5E <willshingleton@home.com>
Message-ID: <Unue4.1025$hJ1.18398@news.rdc1.tx.home.com>
Source record: 64256

Kenwood Yg-455S-1 crystal filter. This filter was maybe used in the kenwood 940, 950 series radios. It is for the 455 Khz IF. I think the bandwidth is either 2.4 or 2.8Khz. Will ship for $28.00

Will

254. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <cdcl7sgic7vgksv7he3i3e5ahobr7mlac1@4ax.com>
Source record: 64257
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Bear <nospam@nospam.org>
shared these priceless pearls of wisdom:

-> For Sale: #1,000 2N2222 transistors. NOS, Motorola, Metal case. Price
->= $35 plus UPS. USA only

Why would I do that when they are $25/K from most every supplier in town?

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

255. Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <387ABD25.7AA3535D@NO-SPAMtcainternet.com>
Source record: 64258

Greetings,

For one of my first ham projects I'm going to build an antenna tuner.
Does anyone know of a source for those cross needle meters like MFJ and
others use? I really like the way they look.

Thanks

NOTE: To reply directly to me, please remove NO-SPAM from my email
address.
Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
received as a result of posting to these newsgroups, I find no other
easy
solution.
--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address
will not be tolerated. All spam is subject to a $200 per incident
processing fee and possible legal action pursuant to federal
regulations.

256. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <uAAe4.16255$Lf2.438881@news6.giganews.com>
Source record: 64259

Buy one from MFJ.

73, Bob K6DDX

257. Re: Why put at 3.3M resistor betwen transformer pri and sec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-10 00:00:00 UTC
From: Cortland Richmond <ka5s@saber.net>
Message-ID: <387AD717.D7D8E4AA@saber.net>
Source record: 64260

My guess is, it's a static drain.

Cortland

wsanders at netcom dot com wrote:

> I was RFI-proofing this Sony 6V power supply and noticed a 3.3M
> resistor placed between one leg of the transformer primary and the
> negtive DC lead. The PS is plain old unregulated DC supply with a bridge
> rect and a big electrolytic.
>
> I use a Sony 7600G radio with the supply and the radio is unstable when
> the (unpolarized!) plug puts the resistor on the hot side of the AC.
> Removing the resistor had no effect on RFI but it did get rid of the
> 7600G's sensitivity to the orientation of the plug.
>
> I can think of no reason for this to be there, except possibly to bleed
> off static charge from the device it's plugged into. Any ideas why they
> would have put this in? I've never seen such a thing in an schematic.
>
> -KF6IIU
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

258. Re: Unblocked scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Karl <kshoeNOSPAM@juno.com>
Message-ID: <387BF468.44E9@juno.com>
Source record: 64261

I never thought of that-guess I'm too ignorate.
Karl
--
kshoeNOSPAM@juno.com (take the NOSPAM out)

259. Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: crabtreejr@aol.com
Message-ID: <20000110233045.05798.00001429@ng-cm1.aol.com>
Source record: 64262

Hello All

I had a letter today from the ARRL saying that they had purchased Communications Quarterly magazine from CQ publications, and would be combining it immediately with QEX.

Farewell to an excellent magazine. It is a sign of the times.

73

John. KC0GGH

260. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <85f5fh$tq2$1@nnrp1.deja.com>
Source record: 64263

In article <387a1b97@news.marun.edu.tr>,
"ta2ad" <ta2ad@yahoo.com> wrote:
> hi
> My Kenwood TS-140S is not work
>
> Symptoms : receiver is not work , not sound
> display sometime working , sometime only points
> I always hear cw " UNLOCK "
>
> I have`t circuit schema do you know any web adres for schema ?
> can you help me for this error ?
> 73`s A. Sua TORTU TA2AD
>
>

Ask people on py1aa@openlink.com.br to see if they have the manuals.
It is the brazilian ham league in Rio de Janeiro.

--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

261. Re: Low Power Design Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <85f5letqm1@nnrp1.deja.com>
Source record: 64264

In article <38790397.C644F4AF@cwcom.net>,
Duncan Walters <tesla@cwcom.net> wrote:
> I want to build a simple no-frills basic CW transmitter for any single
> HF band
> 40 thru 10m.
> I want the design to power up from a very low D.C. voltage source
(less
> than 3 volts)
> using just standard parts.
> Has anyone out there got any circuit designs that I could use to form
> the basis of
> such a design, or could perhaps suggest a source of reference to such
> circuits or schematics?
> Any help or assistance would be greatly appreciated.
> Please reply soon.
> Best 73's Duncan J Walters G4DFV
>
>

Use a CMOS inverter-gate crystal oscillator and filter its output as to
harmonics.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

262. Motorola Michrophones/other radio use

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <JrFe4.513$3P3.2091@ozemail.com.au>
Source record: 64265

I have a Motorola microphone from a 800mhz Digital radio, i would like to use this mic on my HF transceiver. Can anyone help me with the connections. It has 4 wires coming off a circuit board, red, blue,green and black. It is an electret microphone, Marked as 9718 Motorola HMN3596A. What voltages does this little PCB and mic need to work etc?

Will

263. Re: Why put at 3.3M resistor betwen transformer pri and sec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Brent Walton <kf6fgb@pacbell.net>
Message-ID: <387B2EC5.650AD1BE@pacbell.net>
Source record: 64266

Probably to bleed off the big electrolytic cap.

wsanders at netcom dot com wrote:

> I was RFI-proofing this Sony 6V power supply and noticed a 3.3M
> resistor placed between one leg of the transformer primary and the
> negtive DC lead. The PS is plain old unregulated DC supply with a bridge
> rect and a big electrolytic.
>
> I use a Sony 7600G radio with the supply and the radio is unstable when
> the (unpolarized!) plug puts the resistor on the hot side of the AC.
> Removing the resistor had no effect on RFI but it did get rid of the
> 7600G's sensitivity to the orientation of the plug.
>
> I can think of no reason for this to be there, except possibly to bleed
> off static charge from the device it's plugged into. Any ideas why they
> would have put this in? I've never seen such a thing in an schematic.
>
> -KF6IIU
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

264. Re: Which Microwave Band?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <85fgfk$5ss$1@nnrp1.deja.com>
Source record: 64267

In article <85a0r8$1340$1@newssvr04-int.news.prodigy.com>,
"Brad Dyson" <n4trc@prodigy.net> wrote:
>
> I am considering which Microwave band that I want to start out
> experimentations with. Here is some of the criterion that I am
considering...

Since there aren't any locals (or you wouldn't be asking
here), you will probably want to build two stations to
make sure you have somebody to talk to. This also helps
when testing things.

While it seems to be grossly unfashionable these days, the
easiest and cheapest microwave mode is 10 GHz WBFM. I built
two stations for less than $CDN100. A nice wide band (500 MHz
wide) that's easy to use - who could ask for more?
--
Laura Halliday VA3LDH "Que les nuages soient notre pied
Grid: FN03gs a terre..." - Hospital/Shafte
Satellite: VA3SFL on AO-16, UO-22, KO-23, KO-25

Sent via Deja.com http://www.deja.com/
Before you buy.

265. Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: lagniappe <lagniappe@my-deja.com>
Message-ID: <85ft27$f4p$1@nnrp1.deja.com>
Source record: 64268
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Looking for a kit, or fairly detailed plans, for a QRP
CW transceiver that uses the same crystal for both transmit
and receive. The scheme could be some sort of built-in
"pulling" capacitance to shift freq by a KHz or so on
synchronous receive, or some other design. Looking for
a very simple, small, low-power circuit.

thanks,

Martin

Sent via Deja.com http://www.deja.com/
Before you buy.

266. Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: lagniappe <lagniappe@my-deja.com>
Message-ID: <85ft3c$f4v$1@nnrp1.deja.com>
Source record: 64269

Looking for a kit, or fairly detailed plans, for a QRP
CW transceiver that uses the same crystal for both transmit
and receive. The scheme could be some sort of built-in
"pulling" capacitance to shift freq by a KHz or so on
synchronous receive, or some other design. Looking for
a very simple, small, low-power circuit.

thanks,

Martin

Sent via Deja.com http://www.deja.com/
Before you buy.

267. FS: AEA isoloop components CHEAP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Rudi Wiedemann <wiedemann@home.com>
Message-ID: <mIHe4.16730$s5.213494@news1.frmt1.sfba.home.com>
Source record: 64270
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Have original AEA isoloop parts. Big black body cracked after too much UV and too many birds!

The band and variable cap with the stepper motor drive and controller box with power pack are available. All in good working condition. Even have 100 ft of controller cable!

Make offer, including shipping.

73s......Rudi - KF6RLQ

268. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1101001304350001@usrh-5-164.hip.cam.org>
Source record: 64271

In article <20000110233045.05798.00001429@ng-cm1.aol.com>,
crabtreejr@aol.com (John Crabtree) wrote:

> Hello All
>
> I had a letter today from the ARRL saying that they had purchased
> Communications Quarterly magazine from CQ publications, and would be combining
> it immediately with QEX.
>
> Farewell to an excellent magazine. It is a sign of the times.
>
> 73
>
> John. KC0GGH

Obviously, CQ publications must be having problems, since they've also
eliminated their VHF magazine intended for communicators. Or perhaps
the death of the publisher last year is creating change, just as when
Jim Fisk died, and Ham Radio magazine changed.

I've seen QEX, and what's in it is okay, but it is rather small for
the money. There was a time when that sort of thing would fit right
into QST, without additional cost. I haven't seen QEX in years, because
the place selling it locally closed. I just can't justify the outlay
for QEX, not only is there the subscription price, but if you aren't
an ARRL member, then there's an extra fee, and if you don't live in
the US, there's an extra fee, and then of course there's the exchange
rate that brings it higher.

I wonder if this means QEX will change to be more like CommQuart, or
if the latter just really fades away?

I guess this explains the comment about a month ago about the ARRL
putting Ham Radio magazine on CDROM. At the time, it seemed like
a case of expertise and distribution; now it sure looks like the
rights to ham Radio were part of the package.

Michael VE2BVW

269. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Dana Myers K6JQ <dmyers@qnet.com>
Message-ID: <387B79E9.8CFDCAC2@qnet.com>
Source record: 64272

Michael Black wrote:

> I wonder if this means QEX will change to be more like CommQuart, or
> if the latter just really fades away?

QEX has really improved over the last few years; it is bi-monthly now
with increased content. One could argue that QEX is already looking
more like CommQuart.

> I guess this explains the comment about a month ago about the ARRL
> putting Ham Radio magazine on CDROM. At the time, it seemed like
> a case of expertise and distribution; now it sure looks like the
> rights to ham Radio were part of the package.

Yikes, if the entire library of Ham Radio ends up on CDROM, I'm going
to have get another cabinet to hold the CDs :-).

Dana

270. Re: Swept Frequency Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: "Carel Mulder (PA0CMU)" <cmulder@casema.net>
Message-ID: <387B8291.316A008C@casema.net>
Source record: 64273
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.hf

Hi groups,

Thanks all for your answers, I received the article in PDF format.

73 Carel, PA0CMU.

271. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <387B85FD.44D@ixpres.com>
Source record: 64274
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Jim Weir wrote:
>
> Bear <nospam@nospam.org>
> shared these priceless pearls of wisdom:
>
> -> For Sale: ≠1,000 2N2222 transistors. NOS, Motorola, Metal case. Price
> ->= $35 plus UPS. USA only
>
> Why would I do that when they are $25/K from most every supplier in town?
>
> Jim
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

Jim,

Shhhh.. ur not 'sposed to know that, don't y'know... HI

73,
Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

272. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <387B86E6.883C4988@valley.net>
Source record: 64275

Michael Black wrote:

> In article <20000110233045.05798.00001429@ng-cm1.aol.com>,
> crabtreejr@aol.com (John Crabtree) wrote:
>
> > Hello All
> >
> > I had a letter today from the ARRL saying that they had purchased
> > Communications Quarterly magazine from CQ publications, and would be combining
> > it immediately with QEX.
> >
> > Farewell to an excellent magazine. It is a sign of the times.
> >
> > 73
> >
> > John. KC0GGH
>
> Obviously, CQ publications must be having problems, since they've also
> eliminated their VHF magazine intended for communicators. Or perhaps
> the death of the publisher last year is creating change, just as when
> Jim Fisk died, and Ham Radio magazine changed.
>
> I've seen QEX, and what's in it is okay, but it is rather small for
> the money. There was a time when that sort of thing would fit right
> into QST, without additional cost. I haven't seen QEX in years, because
> the place selling it locally closed. I just can't justify the outlay
> for QEX, not only is there the subscription price, but if you aren't
> an ARRL member, then there's an extra fee, and if you don't live in
> the US, there's an extra fee, and then of course there's the exchange
> rate that brings it higher.
>
> I wonder if this means QEX will change to be more like CommQuart, or
> if the latter just really fades away?
>
> I guess this explains the comment about a month ago about the ARRL
> putting Ham Radio magazine on CDROM. At the time, it seemed like
> a case of expertise and distribution; now it sure looks like the
> rights to ham Radio were part of the package.
>
>

Hello--
From a free-lance writer's viewpoint, the CQ family of magazines has always paid its

writers very slowly-- sometimes, it took a year or more for them to send a payment check.

I'll greatly miss Communications Quarterly, though-- editor Terry Littlefield did an

excellent job, as did Peter Bertoni and the other technical advisors and contributors.

Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related construction magazine, catering to audio/radio/robotics/model aircraft/amateur telephony
and tesla coils-- all at a level supported by whatever components you can still purchase
off-the-rack at Radio Shack.

Dark days are indeed upon us....

73,
Brad AA1IP

273. Re: Cross needle meter source? Glide-slope ind.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <387B879E.8C866976@valley.net>
Source record: 64276

"Randall D. DuCharme" wrote:

> Greetings,
>
> For one of my first ham projects I'm going to build an antenna tuner.
> Does anyone know of a source for those cross needle meters like MFJ and
> others use? I really like the way they look.
>
> Thanks
>

Hello--
IIRC, once upon a time Fair Radio offered a military-surplus cross-point meter originally
used in an aircraft glide-slope indicator. I don't know whether it's still available or what
the meter offered in the way of sensitivity, but perhaps someone else can help.

73,
Brad AA1IP

274. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <85g3dh$9p2$6@campus3.mtu.edu>
Source record: 64277

Randall D. DuCharme <randyd@NO-SPAMtcainternet.com> wrote:
> Greetings,

> For one of my first ham projects I'm going to build an antenna tuner.
> Does anyone know of a source for those cross needle meters like MFJ and
> others use? I really like the way they look.

--> You may have to buy a stand-alone cross-needle SWR meter and take out
the "guts." This would have the obvious advantage of already having
properly calibrated markings for the power scales and the SWR nomograph.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"[Television] won't be able to hold on to any market it captures after the
first six months. People will soon get tired of staring at a plywood box
every night." -- Darryl Zanuck, 20th Century Fox Studios chief, in 1946.

275. Re: Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Mark Erbaugh <mark@nospam.microenh.com>
Message-ID: <387ba621$0$1393@news.voyager.net>
Source record: 64278
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> Looking for a kit, or fairly detailed plans, for a QRP
> CW transceiver that uses the same crystal for both transmit
> and receive

Check out the SP-1B (Spider) from Lectrokit

www.sanduskyohio.com/lectrokit

Note: the kit does not include the crystal. If you have a source for rocks
please let me know as I need one to complete the kit.

73,
Mark

276. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387BA943.A2A295B0@agilent.com>
Source record: 64279

Brad Thompson wrote:

> Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
> construction magazine, catering to audio/radio/robotics/model aircraft/amateur
> telephony
> and tesla coils-- all at a level supported by whatever components you can still
> purchase
> off-the-rack at Radio Shack.

I didn't notice any postings about it yet, but surely it's just 'cuz I missed them...but the latest issue of "Electronics Now" that I got...isn't. Now it's "Poptronics," the merging of Popular Electronics and Electronics Now.

Building Tesla coils from RS componenets? Wow, what an interesting thought!

Cheers,
Tom

277. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1101001813360001@usrh-5-138.hip.cam.org>
Source record: 64280

In article <387BA943.A2A295B0@agilent.com>, Tom Bruhns
<tom_bruhns@agilent.com> wrote:

> Brad Thompson wrote:
>
> > Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
> > construction magazine, catering to audio/radio/robotics/model
aircraft/amateur
> > telephony
> > and tesla coils-- all at a level supported by whatever components you
can still
> > purchase
> > off-the-rack at Radio Shack.
>
> I didn't notice any postings about it yet, but surely it's just 'cuz I
> missed them...but the latest issue of "Electronics Now" that I
> got...isn't. Now it's "Poptronics," the merging of Popular Electronics
> and Electronics Now.
>
> Building Tesla coils from RS componenets? Wow, what an interesting
> thought!
>
> Cheers,
> Tom

Michael Covington, a Ham, who takes care of the Q&A column in "Electronics
Now" and may have some greater role in the magazine, started a long thread
a couple of months back in one of the sci.electronics.* newsgroup about
the impending merger of the two magazines. Actually, the merger was
incidental, but he was interested in hearing about what people thought
about the future of electronic hobby magazines.

Is 73 still around? It kept getting smaller, and less interesting,
and then it wzs sporadic here in Montreal. Then sometime last year, it
stopped showing up at the newsstands here. It appeared to be a cutback
in distribution, but it didn't seem all that healthy the last time
I saw it, so I don't think it's got much time left. Though Wayne
was on Art Bell last week, and seemed the same as always.

Michael VE2BVW

278. FA Great Lot Of Books 30's 40's 50's~~~~

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: NI4L <ni4l@bellsouth.net>
Message-ID: <387BBF40.ACF218CE@bellsouth.net>
Source record: 64281

This auction is for a lot of 7 great books from the 30's
40's and 50's they are as follows:
1-Radio physics course.by Ghirardi(second edition 1942
2-Electrical Fundamentals of
communication.1942 3-Mathematics for Radio and
Communication.1940 4-Elements
of electricity.third edition 1937 5-Fundamentals of
Radio.1942 6-Principals of radio
engineering(electrical engineering)1936 7-Electrical
and radio Dictionary1950 These
books are in good condition. I've had these for a while
and have learned a much
information from them and now ready to pass them on
thanks for looking! these will be
shipped book rate.thanks
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=234809032

279. 4X1000 & 4X1500????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <387C01B6.44F59BE7@NO-SPAMtcainternet.com>
Source record: 64282

Greetings

I have a chance to buy a couple of each. Problem is I can't determine what they are. I can't find pinouts, datasheets, or anything on them. Are they simply non-ceramic versions of the 4CXxxx variety (like the 4X150 is to the 4CX250... etc) or are they something different altogether?

Many thanks!

NOTE: To reply directly to me, please remove NO-SPAM from my email address.
Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM received as a result of posting to these newsgroups, I find no other easy
solution.
--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address will not be tolerated. All spam is subject to a $200 per incident processing fee and possible legal action pursuant to federal regulations.

280. 4PR400A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <387C0269.EBD79547@NO-SPAMtcainternet.com>
Source record: 64283

Greetings,

How does a pulse rated tube compare to a non-pulse rated unit? Output?
Capacitance? Are they 'plug&play' compatable??? ;-) <bad joke... I
know>

Thanks a bunch!

NOTE: To reply directly to me, please remove NO-SPAM from my email
address.
Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
received as a result of posting to these newsgroups, I find no other
easy
solution.
--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address
will not be tolerated. All spam is subject to a $200 per incident
processing fee and possible legal action pursuant to federal
regulations.

281. FS- National HRO Dial and Gearbox

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Jack Berry <jackberry@ameritech.net>
Message-ID: <387C088A.79B7A756@ameritech.net>
Source record: 64284
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur,rec.radio.amateur.homebrew

Up at auction on ebay right now with no reserve.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=234348244

282. Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: John Burch <occupant@dtgnet.com>
Message-ID: <_3Ue4.732$0n1.2234@newsfeed.slurp.net>
Source record: 64285

I got "volunteered" for a (hobby) project that is
going to require small quantities (2-10) of small
value (5 pf to 25 pf) disc caps.

A short visit to www [capacitor] lead me to a few
sites where box car loads of capacitors are
available, but my needs are much more modest
than what the bulk suppliers are set up to handle.

Can someone recommend a small quantity cap
supplier?

Thanks for your time
John B
occupant@dtgnet.com

283. Re: FS- National HRO Dial and Gearbox

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: David Stinson <arc5@ix.netcom.com>
Message-ID: <387C103C.DCFE0C20@ix.netcom.com>
Source record: 64286
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur,rec.radio.amateur.homebrew

Please accept this as the courtesy note it is meant to be.

Most users of these newsgroups have agreed on the following
standards when posting sale or auction listings:

Please preface any auction posting with "FA:"
i.e. "FA: National HRO Coil."

Please preface any direct sale posting with "FS:"
i.e. "FS: Drake TR-4."

This allows those users who do not wish to see auction
postings to set their filters and thus, not see them.

Thank you very much for your help with this.

284. Re: Why put at 3.3M resistor betwen transformer pri and sec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <jAVe4.21031$905.499925@news5.giganews.com>
Source record: 64287

That resistor is in there for safety reasons. There should be a capacitor from the other side of the power line, also to ground. This was, I believe, mandated by some government organization to do with shock and fire hazard on power line operated equipment. It's been around for many years, and I think nearly every piece of consumer line operated gear has it.

Basically it prevents the chassis or user touchable metal parts from building up a high potential that could cause shock.

73, Bob

285. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <HBVe4.17829$Lf2.491602@news6.giganews.com>
Source record: 64288

The PLL circuit has become unlocked and needs to be aligned or repaired. Sometimes these things fix themselves if you reset the processor. How to do that is usually in the owner's manual.

Alignment or repair is another story; you will need a service manal and some test equipment for that.

73, Bob K6DDX

286. Re: skematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <SLVe4.19912$475.503863@news4.giganews.com>
Source record: 64289

You can order a service manual through any authorized Kenwood car stereo service station. You can also inquire on the Kenwood web site.

73, Bob K6DDX

287. ALQUEVA DAM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-11 00:00:00 UTC
From: cc <carlos.cortes@usa.net>
Message-ID: <85fuu8lnr9@duke.telepac.pt>
Source record: 64290

ALQUEVA DAM
With The maximum height of 96 meters, it will create a lagoon with an area of 250Km2, of which 35Km2 are situated in Spain. It will have a total capacity of 4150 hm3, of which 3150hm3 are utilized.
HIDROELECTRICAL CENTRAL
Equipped with 2 turbine/pumps with 120 MVA each, capable of producing around 350 giga/watts a year, double the necessary to supply both ?vora and Beja districts.
The other infrastructures are : Pedrog?o Dam, Primary irrigation system.
The 18 e 19 of March operation, will be organized by A.R.V.M. in collaboration with Agr.61 of Santa Maria dos Olivais and the objective is, to give one last opportunity for the radio amateurs all over the world, to contact this village that will soon be completely submerged by the waters of the Alqueva Dam.
We will be on the air for 48 hours.
So that we can remember Aldeia da Luz in a different way, we are determined to organize this activity so that it will be a milestone within the national radio amateurs
Looking forward to the 18 & 19 of March.
A.V.R.M.
73?s
www.qsl.net/arvm/aldeiadaluz/
www.qsl.net/arvm/
arvm@mail.telepac.pt
_/_/_/

empenhados em realizar esta actividade de forma a ser um marco no
radioamadorismo nacional.
At&#65533; aos pr&#65533;ximos dias 18 & 19 de Mar&#65533;o.
73&#65533;s
www.qsl.net/arvm/aldeiadaluz/
www.qsl.net/arvm/
arvm@mail.telepac.pt

288. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <387C414B.3BC19956@corecomm.net>
Source record: 64194

John Burch wrote:
> I got "volunteered" for a (hobby) project that is
> going to require small quantities (2-10) of small
> value (5 pf to 25 pf) disc caps.
>
> A short visit to www [capacitor] lead me to a few
> sites where box car loads of capacitors are
> available, but my needs are much more modest
> than what the bulk suppliers are set up to handle.

The last time I bought a small-cap assortment from Radio Shack, ALL the
packages were 60% values under 100 pF. Try that.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

289. Re: 4X1000 & 4X1500????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <TcXe4.825$3b6.4114@ozemail.com.au>
Source record: 64195

4cx1000 and 1500 are exceptional tubes. The 4cx1500b has outstanding 3rd order imd figures better than -40 db. The 4cx1500a has higher output power and higher plate volts requirements. The 4cx1000 is about the same as the 1500a and can be interchanged. I would select the 4cx1500 series of tubes for the higher plate disipation.

Randall D. DuCharme <randyd@NO-SPAMtcainternet.com> wrote in message news:387C01B6.44F59BE7@NO-SPAMtcainternet.com...
> Greetings
>
> I have a chance to buy a couple of each. Problem is I can't determine
> what they are. I can't find pinouts, datasheets, or anything on them.
> Are they simply non-ceramic versions of the 4CXxxx variety (like the
> 4X150 is to the 4CX250... etc) or are they something different
> altogether?
>
>
> Many thanks!
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email
> address.
> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a result of posting to these newsgroups, I find no other
> easy
> solution.
> --
> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>
> Unsolicited commercial email (SPAM) received at this email address
> will not be tolerated. All spam is subject to a $200 per incident
> processing fee and possible legal action pursuant to federal
> regulations.

290. make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: mike <ipas.m@netclic.fr>
Message-ID: <w_Xe4.128$Tk.708789@nnrp1.proxad.net>
Source record: 64196

Hi
I ' m a new ham and i would like to make a 1 kw power amplifier
for decametric's frequencies
but i havn't any schematic or pcb ...
So if you have some info please send them to me
thank's
My e-mail is
ipas.m@netclic.fr

291. Re: Why put at 3.3M resistor betwen transformer pri and sec?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "George Beloin", WA1PIX <poorgeorgeNOpoSPAM@juno.com.invalid>
Message-ID: <06f84faa.840e1508@usw-ex0106-048.remarq.com>
Source record: 64197

Dear Sir:
The tip off to that resistor being intended as some kind of a bleeder is it's extremely high value. The current through that resistor would be so low that an active circuit would almost not see it. However, I can't see why in the world, high value or not, someone would engineer a resistor going straight to the AC line. Since this is not my forte, why not ask the people who are the experts in this? Contact Underwriter's Laboratories (UL) in Northfield, Illinois. I'm sure that power pack is UL accepted and someone there could probably tell you exactly what the rational is in putting that resistor there or (stanger things have happend) if it's a mistake. I believe they have a Web site at: www.ul.com also. When you find out the answer, post it for all of us, so we can know the solution too. Yours, George, WA1PIX

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

292. Re: Low Power Design Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "George Beloin", WA1PIX <poorgeorgeNOpoSPAM@juno.com.invalid>
Message-ID: <0bf34ecd.879f6012@usw-ex0106-048.remarq.com>
Source record: 64198

Send an e-mail to: tis@arrl.org on this and you should get some
references back on any League publications or articles that might meet
your desires.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

293. Re: Callbook Listings Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "George Beloin", WA1PIX <poorgeorgeNOpoSPAM@juno.com.invalid>
Message-ID: <1761dd4a.8f7e4bbb@usw-ex0106-048.remarq.com>
Source record: 64199

You probably know that you can get this for a price from the Callbook folks. However, few people know that the ARRL has a collection of old Callbooks in their library. Send an e-mail to: n1kb@arrl.org and ask John if he can go into the library and copy this for you. Yours,
George, WA1PIX

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

294. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <85hm8i$2kh$1@news1.exit109.com>
Source record: 64200
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

where can I buy 1 K 2n2222 metal can to18 trannies for
$25 ? Certainly not mouser !

73's

Don W6JL wrote in message <387B85FD.44D@ixpres.com>...
>Jim Weir wrote:
>>
>> Bear <nospam@nospam.org>
>> shared these priceless pearls of wisdom:
>>
>> -> For Sale: #1,000 2N2222 transistors. NOS, Motorola, Metal case.
Price
>> ->= $35 plus UPS. USA only
>>
>> Why would I do that when they are $25/K from most every supplier in town?
>>
>> Jim
>> Jim Weir, VP Eng. RST Eng. WX6RST
>> A&P, CFI, and other good alphabet soup
>
>
>Jim,
>
> Shhhh.. ur not 'sposed to know that, don't y'know... HI
>
> 73,
> Don, W6JL
>
>--
>□□□□

295. Tubes and caps on e-bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: DJ and Tater <dcintheplace2b@gibralter.net>
Message-ID: <387C75A0.D276044C@gibralter.net>
Source record: 64201

Check out the following auction for many sweep tubes and HV caps eBay
Seller List: dcisinthehouse... 4 days left!!!

296. 2N2222 Transistors Anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Duncan Walters <tesla@cwcom.net>
Message-ID: <387C8007.EE50050@cwcom.net>
Source record: 64202

Can anyone tell me where I can buy 1000 new 2N2222 TO-18 metal cased
transistors for 25-35 US Dollars?
I have ready cash waiting to send direct by airmail to the first person
who can sell me these goods (inclusive of all shipping costs).
Any details of dealers or stockists would be greatly appreciated.
Please reply by e-mail soon.
Best wishes,
Duncan J Walters G4DFV

297. Re: FS- National HRO Dial and Gearbox

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Jack Berry <jackberry@ameritech.net>
Message-ID: <387C8660.D5FEECD3@ameritech.net>
Source record: 64203
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur,rec.radio.amateur.homebrew

David:
Thanks for the information. I had just found these groups in
December. I had been seeing FS and other letters ahead of listings and
was trying to figure out what they ment such as WTB, WTD and most of
them I could figure out. Sorry for any inconvienence to others in the
group.

Jack

David Stinson wrote:

> Please accept this as the courtesy note it is meant to be.
>
> Most users of these newsgroups have agreed on the following
> standards when posting sale or auction listings:
>
> Please preface any auction posting with "FA:"
> i.e. "FA: National HRO Coil."
>
> Please preface any direct sale posting with "FS:"
> i.e. "FS: Drake TR-4."
>
> This allows those users who do not wish to see auction
> postings to set their filters and thus, not see them.
>
> Thank you very much for your help with this.

298. Electret Preamp Help Request

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: mike pitoniak <michael_pitoniak@3com.com>
Message-ID: <38a139f2.31e1f6e7@usw-ex0107-042.remarq.com>
Source record: 64204

Hi Folks,

I am trying to construct a electret boom or lapel mike for my aviation ICOM radio. I have the schematic of the speaker mike they offer, and essentially have to reproduce the microphone preamp circuit shown. I am a little fuzzy on my circuit design, could someone give me a hand in reproducing the microphone amplification circuit with radioshack components?

I have a copy of the schematic, so if you can help please just send me mail and i will forward it. The tricky part of the circuit is the way the amplified signal rides on top of the supply vlotage for the circuit (derived from the radio plug). It is possible i could get away with a simple op amp circuit, but no one can figure out the gain i need.

many thanks,

mike

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299. Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <387C8CF6.877EBB60@twcny.rr.com>
Source record: 64205
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

When plate-modulating an RF amplifier (according to the ARRL Handbook) there should be no noticeable change in the plate current of the AMP when modulation is applied. This being due to the effects of cancellation from the next half-cycle of the modulated wave. Or something like that.

Somewhat confused here: Granted, a milliammeter cannot follow the rapid changes in the af (modulation), but then how/why can you "see" the plate current of a *modulator* tube kick up on voice peaks? The current variation is clearly visible there.

What is the difference between these two situations?

Many thanks for any help...
[Pls reply to newsgroup, or if directly, to <jwgbee@hotmail.com> (not the address above) thanks]

73,
J.
n1aep

300. Re: 2N2222 Transistors Anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Mark Fraser <mfraser@helix.net>
Message-ID: <387C892B.164C7915@helix.net>
Source record: 64206

Part number G9696 at Electronic Goldmine
(PN2222)
http://www.goldmine-elec.com

For National PN2222, they want 35.00,
and *2N*2222 TO18s were on sale at 4/1.00 until Monday of this week.
These are metal, the others (*PN) are plastic.
/mark

Duncan Walters wrote:
>
> Can anyone tell me where I can buy 1000 new 2N2222 TO-18 metal cased
> transistors for 25-35 US Dollars?
> I have ready cash waiting to send direct by airmail to the first person
> who can sell me these goods (inclusive of all shipping costs).
> Any details of dealers or stockists would be greatly appreciated.
> Please reply by e-mail soon.
> Best wishes,
> Duncan J Walters G4DFV

301. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <387C8FFA.B3C4369A@twcny.rr.com>
Source record: 64207
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

I.e.,:
Presuming that the modulator is supplying an increase in power (and
therefore current) to the plate of the final amp, why wouldn't it show up
as an increase ("kick") on the final's plate milliameter, as it does on the
modulator's plate milliameter?

thanks again for any comments/info

73

reply to: jwgbee@hotmail.com

302. Re: FS- National HRO Dial and Gearbox

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: David Stinson <arc5@ix.netcom.com>
Message-ID: <387C9DF2.AF9AE224@ix.netcom.com>
Source record: 64208
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur,rec.radio.amateur.homebrew

No problem at all- we're all "new" some time!
Welcome aboard! You'll find mostly great people
and a few, ummm... "rude" fellas. No doubt you've
probably heard from one or two ;-).
Good luck on your sale and
Kind Regards,
Dave S.

303. Re: Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: lagniappe <lagniappe@my-deja.com>
Message-ID: <85ia9p$6us$1@nnrp1.deja.com>
Source record: 64209
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <387ba621$0$1393@news.voyager.net>,
"Mark Erbaugh" <mark@nospam.microenh.com> wrote:
>
> > Looking for a kit, or fairly detailed plans, for a QRP
> > CW transceiver that uses the same crystal for both transmit
> > and receive
>
> Check out the SP-1B (Spider) from Lectrokit
>
> www.sanduskyohio.com/lectrokit
>
> Note: the kit does not include the crystal. If you have a source for
rocks
> please let me know as I need one to complete the kit.
>
> 73,
> Mark
>
>

Mark,

I looked at the SP-1B as you noted, but it appears to me that
this radio is not a single-crystal rig. The illustration shows
two crystals on the radio. The "spider junior" appears to be
a single crystal, but if you read the ad copy you see that it
only uses the crystal for transmit - receive is not crystal-
controlled. As I noted, I'm looking for a scheme that uses some
sort of offset or pulling to get the double-duty.

Martin

Sent via Deja.com http://www.deja.com/
Before you buy.

304. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Vincent <vincent.habchi@art.alcatel.fr>
Message-ID: <387CA4D7.4D7C5D7F@art.alcatel.fr>
Source record: 64210

Michael Black dixit :

> I've seen QEX, and what's in it is okay, but it is rather small for
> the money. There was a time when that sort of thing would fit right
> into QST, without additional cost. I haven't seen QEX in years, because

Well, obviously you must be right within the US or Canada.

But, from Europe we are happy to have a separate issue for QEX (even though it might be thought as expensive), because mainly what is in QST does not really concern us. I find worthy to invest some bucks (euros over here) in QEX, I would change my mind if it were to become part of QST.

> the place selling it locally closed. I just can't justify the outlay
> for QEX, not only is there the subscription price, but if you aren't
> an ARRL member, then there's an extra fee, and if you don't live in
> the US, there's an extra fee, and then of course there's the exchange
> rate that brings it higher.

True, and I had planned to object to this particular point. I don't want to become an ARRL member, for what use ? I am in Region 1, secretary of a French-wide amateur radio association, so I am already pretty involved in all that regards European and French aspects of ham radio. It seems unfair to be charged for something I wouldn't benefit of in any case.

My $.10))
Vincent F5RCS

--
Vulnerant omnes, necat ultima.
La sï¿½mantique gï¿½nï¿½rale en Europe : http://www.esgs.org

305. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <387CA82D.ADA62436@mlecmn.net>
Source record: 64211

John Burch wrote:
>

>
> Can someone recommend a small quantity cap
> supplier?
>
http://www.mouser.com
--
Lyle, K0LR

http://www.computerpro.com/~lyle

306. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <387CB181.52E6DC24@concentric.net>
Source record: 64212

Brad Thompson wrote:

> <snip>

> Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
> construction magazine, catering to audio/radio/robotics/model aircraft/amateur
> telephony
> and tesla coils-- all at a level supported by whatever components you can still
> purchase
> off-the-rack at Radio Shack.
>

<snip>
Pray tell, what would that wonderful magazine be??
I get 73 and QST and it ain't them...
Jim W5AOX (who REALLY mourns the demise of Ham Radio magazine)

307. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <85ief7$6pf$1@plutonium.btinternet.com>
Source record: 64213
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

If plate current varies much, say more than 15% during the modulation
cycle, then the amlifier is being overmodulated (greater than 100%)
and distortion will be evident when the carrier is demodulated.
Listen to it.

Turn down the mike gain control until there is no variation in plate
current. Very likely the modulated amplifier is at present being
driven into behaving as a speech clipper !

If that cannot be done then the amplifier/modulator has been
incorrectly designed or has developed a fault. Check all DC plate,
screen grid volts and control grid bias volts.

==========
Season's Greetings from Reg, G4FGQ
For free technical radio software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
JGinNY <jgovost1@twcny.rr.com> wrote in message
news:387C8CF6.877EBB60@twcny.rr.com...
> When plate-modulating an RF amplifier (according to the ARRL
Handbook)
> there should be no noticeable change in the plate current of the AMP
> when modulation is applied. This being due to the effects of
> cancellation from the next half-cycle of the modulated wave. Or
> something like that.
>
> Somewhat confused here: Granted, a milliammeter cannot follow the
rapid
> changes in the af (modulation), but then how/why can you "see" the
plate
> current of a *modulator* tube kick up on voice peaks? The current
> variation is clearly visible there.
>
> What is the difference between these two situations?
>
> Many thanks for any help...
> [Pls reply to newsgroup, or if directly, to <jwgbee@hotmail.com>
(not
> the address above) thanks]
>
> 73,
> J.
> n1aep

>

308. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Bh3f4.21782$905.519122@news5.giganews.com>
Source record: 64214
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Yes, the modulator does supply more plate current. But it also reduces it on the other half of the cycle, so the average current remains the same if all is linear.

73, Bob K6DDX

309. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1201001256230001@usrh-5-135.hip.cam.org>
Source record: 64215

In article <387BD320.6AAF80ED@hotmail.com>, qsl27@hotmail.com wrote:
[stuff deleted]

>
> PS: Which idiot was it that started this -contesting- thing?
>
>
The idiot would be pretty old by now. Contests started in the early
days. Of course, back then I don't think it was contesting for the
sake of contesting, but contesting to prove your equipment.

I don't know what the earliest contest was, but the one that comes to mind
was the Transatlantic Test back in December of 1921. It set out to
prove that those unwanted higher frequencies could bridge the Atlantic,
and surely required people to put some effort into getting theie
equipment in top-notch shape.

It's in more recent decades that contesting has become an edn product,
and one that often seems to require more stamina than technical skill.

Michael VE2BVW

310. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <lihp7skb4ntr6gdm9uv0sdq99eggjkk863@4ax.com>
Source record: 64216

"John Burch" <occupant@dtgnet.com>
shared these priceless pearls of wisdom:

->Can someone recommend a small quantity cap
->supplier?

www.mouser.com They will sell anything from onesies on up.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

311. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: phil <phil@invest.fsbusiness.co.uk>
Message-ID: <Z+To9NAC2Lf4EwQn@invest.fsbusiness.co.uk>
Source record: 64217

Hello MC,
>I hate to say it, well actually I don't. Most of the radio & electronics
>hobbyist
>magazines I've read are absolute rubbish. The one exception I can think of is
>the
>Brit mag -Practical Wireless-. If you want some meat and potatoes radio
>technical
>digest, you'll have to subscribe to some of the trade journals that deal with
>broadcast, mobile and microwave radio. They are free to those in the industry -
>and well worth the price! :->
Thanks for giving PW a note of praise.

It is a good read.

I thought you had Pop Comms to cater for the general hobbyist, SWL and
low power radio enthusiasts?

Phil / UK G4ZOW

312. Re: Which Microwave Band?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <85inc7hua1@nnrp1.deja.com>
Source record: 64218

A certain Canadian nutcase wrote:

> While it seems to be grossly unfashionable these days, the
> easiest and cheapest microwave mode is 10 GHz WBFM. I built
> two stations for less than $CDN100. A nice wide band (500 MHz
> wide) that's easy to use - who could ask for more?

One of the better references on the subject, by the way, is the
RSGB's book _Practical Transmitters for Novices_. Buy it!
--
Laura Halliday VA3LDH "Que les nuages soient notre pied
Grid: FN03gs a terre..." - Hospital/Shafte
Satellite: VA3SFL on AO-16, UO-22, KO-23, KO-25

Sent via Deja.com http://www.deja.com/
Before you buy.

313. WANTED: AMPERITE 5NO180 RELAY/TIMER TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Frank Dubec <frankdubec@earthlink.net>
Message-ID: <387CDE68.76E8DABB@earthlink.net>
Source record: 64219

8 PIN OCTAL SOCKET

5 VOLTS, 180 SECONDS ONLY

PLEASE EMAIL IF YOU HAVE ONE OR KNOW WHERE I MIGHT FIND ONE

TNX 73'zzzzzz

314. S-100 Processor board or modem board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Alan <ChipsnDips@snet.net>
Message-ID: <85ilei$lju@news1.snet.net>
Source record: 64220
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm looking for an S-100 processor board or an S-100 modem board (both). If you have one or both and interested in selling please contact me directly at chipsndips@snet.net

Alan

315. Re: WANTED: AMPERITE 5NO180 RELAY/TIMER TUBE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <387D0D38.AC40E623@home.com>
Source record: 64221

Amperite is still in business and they have a website.

Frank Dubec wrote:

> 8 PIN OCTAL SOCKET
>
> 5 VOLTS, 180 SECONDS ONLY
>
> PLEASE EMAIL IF YOU HAVE ONE OR KNOW WHERE I MIGHT FIND ONE
>
> TNX 73'zzzzzz

316. '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <387D0D73.67AD7474@home.com>
Source record: 64222

I have been searching in vain for a SPICE model for the 4046 PLL, anyone care to point me in the right direction?

317. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <85iv7t$o0m$1@nnrp1.deja.com>
Source record: 64223

Since hardcore techies are a minority in ham radio,
does it not stand to reason that there aren't many
hardcore techie magazines anymore?

I haven't seen 73 in a long time locally (Toronto),
and the last issues I saw were pretty anemic. I
subscribe to VHF Communications, and when its future
was in doubt was planning to flip a coin over Dubus
or UKW-Berichte (the German parent of VHF Comm-
unications). But that's sorted and I look forward
to seeing issue 1/2000 from the new publishers.

One of my faves was Electronics World (which started
life way back when as Wireless World) but either it
ceased publication at the end of last year or the Canadian
distribution deal ended. Sigh.

Magazines like RF Design are a gas if you can get them
for free. They're pricey if you have to pay for them...
--
Laura Halliday VA3LDH "Que les nuages soient notre pied
Grid: FN03gs a terre..." - Hospital/Shafte
Satellite: VA3SFL on AO-16, UO-22, KO-23, KO-25

Sent via Deja.com http://www.deja.com/
Before you buy.

318. Re: Electret Preamp Help Request

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387CE676.30148FBC@agilent.com>
Source record: 64224

What you describe sounds like what's already built into pretty much
every electret mic capsule. Are you sure you need more than that? It
seems unusual to add more amplifier stages external to the radio. But
if you'd like to send along a .gif (NOT a .jpg) of the schematic to me
at k7itm@aol.com, I'll have a look at it for you tonight.

Cheers,
Tom

mike pitoniak wrote:
>
> Hi Folks,
>
> I am trying to construct a electret boom or lapel mike for my aviation
> ICOM radio. I have the schematic of the speaker mike they offer, and
> essentially have to reproduce the microphone preamp circuit shown. I am
> a little fuzzy on my circuit design, could someone give me a hand in
> reproducing the microphone amplification circuit with radioshack
> components?
>
> I have a copy of the schematic, so if you can help please just send me
> mail and i will forward it. The tricky part of the circuit is the way
> the amplified signal rides on top of the supply vlotage for the circuit
> (derived from the radio plug). It is possible i could get away with a
> simple op amp circuit, but no one can figure out the gain i need.
>
> many thanks,
>
> mike
>
> * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> The fastest and easiest way to search and participate in Usenet - Free!

319. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Jonesy <jonesy@rmi.nospam.net>
Message-ID: <vL5f4.1521$P4.294688@den-news1.rmi.net>
Source record: 64225

John Burch <occupant@dtgnet.com> wrote:
> I got "volunteered" for a (hobby) project that is
> going to require small quantities (2-10) of small
> value (5 pf to 25 pf) disc caps.
> Can someone recommend a small quantity cap
> supplier?

Check out the Goodies at Dan's Small Parts:

http://www.fix.net/dans.html

HTH, es 73
Jonesy W3DHJ

--
Marvin L. Jones jonz-AT>rmi.net W3DHJ
Gunnison, Colorado
So -- that was Y2K, huh? Big Deal!
354 days to go until the 3rd Millennium of the C.E.

320. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387CEC13.C8D3D2EA@agilent.com>
Source record: 64226
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

You're right that with linear modulation with zero DC content, the current from the plate supply of the plate modulated stage will not change. You're also right that the RF power increases during modulation. With 100% sinewave modulation, you'll have 150% of the unmodulated RF power output. So what's going on here?

To begin with, the additional power is being supplied by the modulator, not the DC plate supply. So, from that standpoint alone, you expect the DC plate supply to keep supplying the same power. Since it (the plate supply) is constant voltage, you expect constant current.

IF your modulator output stage were class A (ouch!), then you wouldn't see a change in modulator plate current either, from no signal to full modulation. But of course, they usually are class B or AB, and at full output the plate current is greater than at idle, just as in a linear class AB or B RF amplifier.

So, what the heck is going on in the RF plate circuit/modulator? How can you analyze this and understand how the average DC current can remain the same but the power increases? OK...in an amplifier that modulates linearly, the RF output voltage (RMS, or peak voltage per RF cycle) will be linear with instantaneous plate supply voltage...that is, as the modulator output swings the plate supply voltage up and down, the RF voltage will track that proportionally. So will the instantaneous current supplied to the plate. Now, to make things simple, let's think about a 1000V DC plate supply running 500mA...500W. Let's say the amp is 75% efficient, so the output power is 375 watts, no modulation. Now...apply a square wave modulation, at 100%, so the plate voltage spends some time at 0 V and some time at 2000V, with quick transitions between those levels. At 0V, the current is also 0. But at 2000V, the current is 1000mA, for 2000W. The _average_ current is still 500mA (since the duty cycle is 50% in the square wave). But the _average_ power is 1000W, twice the unmodulated level. Since average current is 500mA and the plate supply is constant at 1000V, it's supplying 500W, just as before. Is the modulator supplying the other 500W? Well, it MUST be. Can we see that? When the plate voltage is zero, the modulator is outputting -1000V, and must be subtracting 500mA from the average, so that's 500W during that half of the cycle. On the other half of the cycle, it's outputting +1000V at +500mA, so that's also 500W. The modulator average power output is 500W... it doesn't go back into the RF plate supply; it goes into the amplifier plate circuit and gets converted to increased RF power.

If you replace the square wave with a sine wave, you can do the same averaging by doing an integral over a cycle, and you'll see the same things happening, but at a lower power. Now the peak of the modulating sinewave is +1000V at +500mA, but the RMS values are 707V and 354mA, for 250 watts of power. And "real" modulating signals generally are less than that in RMS, even though the peaks are still nearly the same in a properly adjusted transmitter.

Hope that helps!

Cheers,
Tom

JGinNY wrote:
>
> When plate-modulating an RF amplifier (according to the ARRL Handbook)
> there should be no noticeable change in the plate current of the AMP
> when modulation is applied. This being due to the effects of
> cancellation from the next half-cycle of the modulated wave. Or
> something like that.
>
> Somewhat confused here: Granted, a milliammeter cannot follow the rapid
> changes in the af (modulation), but then how/why can you "see" the plate
> current of a *modulator* tube kick up on voice peaks? The current
> variation is clearly visible there.
>
> What is the difference between these two situations?
>
> Many thanks for any help...
> [Pls reply to newsgroup, or if directly, to <jwgbee@hotmail.com> (not
> the address above) thanks]
>
> 73,
> J.
> n1aep

321. Variable xtal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387cece8.171387586@news.online.no>
Source record: 64227

S53MV designed a different version of SM5BSZ type variable bandwidth xtal filter. Had a look at some late issues of VHF communications but cannot find it.
Could somebody scan the circuit and pass it to me? I need only the principles. Also MwEc xtal filter circuit mentioned in Radcom 1/2000 is wanted

73 jan-martin LA8AK

322. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387cecc7.171354847@news.online.no>
Source record: 64228
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Wed, 12 Jan 2000 10:53:51 -0800, Bear <nospam@nospam.org> wrote:

>These were high quality USA manufactured transistors by Motorola, not
>the cheap foreign crap that is currently on the market.

By the way, what makes you believe they are better when made in God's
own country? Perhaps you suffers from
the "not-invented-here-syndrome"?

323. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387cebf2.171141821@news.online.no>
Source record: 64229

On Tue, 11 Jan 2000 22:55:31 -0800, "Bob" <balbert@cnmnetwork.com>
wrote:

>The PLL circuit has become unlocked and needs to be aligned or repaired.
>Sometimes these things fix themselves if you reset the processor. How to do
>that is usually in the owner's manual.
>
>Alignment or repair is another story; you will need a service manal and some
>test equipment for that.
>
>73, Bob K6DDX
>
>
try the Post Office
the fault is often dissappeared when it arrives for maintenance, so
you may just as well send it back to yourself

324. Wireless FM Tx module for 1200 Baud.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Moses Clark <itek@sybercom.net>
Message-ID: <JJ6f4.9360$T2.8608646@firenze.visi.net>
Source record: 64230

Greetings,

(Do I really need a radio modem ??)

First of all I have to say I don't know much about RF but, learning...

I am trying to put a little telemetry applications together.

The data is generated at 1200 baud in a TTL level.

I am wondering if I can put this data through the microphone lead on one of those miniature FM transmitter you can find in many different kit shops.

I am going to receive the data using matching speaker jack of the receiver and connect to a PC serial port.

The distance I am trying to work with is one(1) to Five(5) feet and again the speed is 1200 Baud TTL serial signal.

Thank you very much for your help.

Brian

325. Re: Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Mark Erbaugh <mark@nospam.microenh.com>
Message-ID: <387cfa28$0$60721@news.voyager.net>
Source record: 64231
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

> I looked at the SP-1B as you noted, but it appears to me that
> this radio is not a single-crystal rig. The illustration shows
> two crystals on the radio. The "spider junior" appears to be
> a single crystal, but if you read the ad copy you see that it
> only uses the crystal for transmit - receive is not crystal-
> controlled. As I noted, I'm looking for a scheme that uses some
> sort of offset or pulling to get the double-duty.
>
Martin

The SP-1B has two crystal sockets, but this is to provide you with two transmit frequencies (on the same band). You don't have to install both crystals. There is a DPDT switch to select one or the other. The receive tuning is actually RIT and is achieved by a pot connected (through some other components) to the crystal, so I suspect that it is some sort of 'pulling'.

73,
Mark

326. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <85ivpk$4tv$1@campus3.mtu.edu>
Source record: 64232

Bob <balbert@cnmnetwork.com> wrote:
> Alignment or repair is another story; you will need a service manal and some
> test equipment for that.

--> And don't send it to AES. The radio club I'm in sent theirs to AES,
and the problem recurred only a few weeks later.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"[Television] won't be able to hold on to any market it captures after the
first six months. People will soon get tired of staring at a plywood box
every night." -- Darryl Zanuck, 20th Century Fox Studios chief, in 1946.

327. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <387D03DE.14C3@pop.removethistomailme.net>
Source record: 64233

Bear wrote:
>
> x-no-archive: yes

I can see why you post that in front of all your messages. If I had
nothing more to contribute than you appear to, I wouldn't want my posts
to be archived for posterity either. I would probably refrain from
posting my name and call sign, too.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

328. Re: S-100 Processor board or modem board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: 106255.1565@compuserve.com
Message-ID: <387d1143.17456440@news.compuserve.com>
Source record: 64234
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Good gosh - this is the first reference I've seen to S100 in 15 years!
Is there really S100 kit still in use? I gave all mine away when I
got my first IBM pc (I did keep mu tape drive to use on the pc).
Richard
"Alan" <ChipsnDips@snet.net> wrote:

>I'm looking for an S-100 processor board or an S-100 modem board (both). If
>you have one or both and interested in selling please contact me directly at

329. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: jfriley@no.spam.airmail.net
Message-ID: <387d152a.1531357@news.swbell.net>
Source record: 64235

On Wed, 12 Jan 2000 09:55:48 -0800, "Bob" <balbert@cnmnetwork.com>
wrote:

>the average current remains the same if
>all is linear.

The ELMER winner is: (drum roll) BOB!

330. Re: S-100 Processor board or modem board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Glenn Ashmore <gashmore@mindspring.com>
Message-ID: <387D205F.EBB49A62@mindspring.com>
Source record: 64236
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Same here. I gave away my Northstar Horizon almost 20 years ago. Only kept one board stuffed with a gigantic 64K of RAM as a curio.<g>

"Richard C. Ferryman" wrote:

> Good gosh - this is the first reference I've seen to S100 in 15 years!
> Is there really S100 kit still in use? I gave all mine away when I
> got my first IBM pc (I did keep mu tape drive to use on the pc).
> Richard
> "Alan" <ChipsnDips@snet.net> wrote:
>
> >I'm looking for an S-100 processor board or an S-100 modem board (both). If
> >you have one or both and interested in selling please contact me directly at

--
Glenn Ashmore

I'm building a 45' cutter in strip/composite. Watch my progress (or lack there of) at: http://www.mindspring.com/~gashmore

331. Power Connectors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Ken Mirabella <kjm@flo-bin.com>
Message-ID: <zraf4.147$ze4.21200@typhoon-la.pbi.net>
Source record: 64237

Subject: OEM "T" power connectors and Anderson Powerpoles

I have started a new web site to sell the hard to find and "elusive"
Anderson Powerpole connectors that have become (or are becoming) the most
popular power connector for interchangeability in the emergency community
along with Yaesu, Kenwood and Icom mobile OEM "T" power connectors.

www.powerwerx.com was started with hearing the concerns of hams across
the country in newsgroups of "where to purchase these connectors" and other
"hard to find" products at reasonable prices.

PowerWerx.com encourages groups to pool their purchases to obtain a very low
price on power connectors.

I apologize for the commercial promotion, but I feel that an on-line secure
source for these products has not been available for quite some time.

We accept MasterCard/Visa.

The philosophy of "one ham helping another" is now extended from my web site
to you.

Ken, KM6YH
www.powerwerx.com

332. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <BDd9ONfdKiJxZy13rOzIHAnaJO0w@4ax.com>
Source record: 64238
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

On Wed, 12 Jan 2000 13:03:15 -0800, Tom Bruhns <tom_bruhns@agilent.com> wrote:
>You're right that with linear modulation with zero DC content, the
>current from the plate supply of the plate modulated stage will not
>change.

But the reason the meter *does* kick is that the voice modulating signal
isn't either a 50% duty cycle square wave or a symmetric sinewave.
Part of this is due to the nature of the vocal waveform itself. It is complex,
often asymmetric, and most definitely not a pure sinewave. Another part
of this may be due to distortion products introduced in the speech
amplifiers, or in the modulation process itself, ie you could be flattopping.

It isn't unusual to see *some* variation in the plate current under modulation
simply due to the characteristics of the vocal waveform. But if you're seeing
a lot, you've probably got problems. An exception to this would be a transmitter
using controlled carrier modulation. In that case, you do see plate current
variations with modulation *by design* (carrier amplitude is varied so that
it is just sufficient to prevent overmodulation at any modulating level). This
is perfectly normal behavior for this type of transmitter. A few amateur
rigs do AM this way.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

333. Re: Wireless FM Tx module for 1200 Baud.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <ADp9OI=joY4sVRPbqp7jsNBkMlBm@4ax.com>
Source record: 64239

On Wed, 12 Jan 2000 21:53:45 GMT, "Moses Clark" <itek@sybercom.net> wrote:
>(Do I really need a radio modem ??)
>
>First of all I have to say I don't know much about RF but, learning...
>
>I am trying to put a little telemetry applications together.
>
>The data is generated at 1200 baud in a TTL level.
>
>I am wondering if I can put this data through the microphone lead on one of
>those miniature FM transmitter you can find in many different kit shops.
>
>I am going to receive the data using matching speaker jack of the receiver
>and connect to a PC serial port.
>
>The distance I am trying to work with is one(1) to Five(5) feet and again
>the speed is 1200 Baud TTL serial signal.

You can do direct FSK, which is what you're describing. But there are
a few caveats. You should have a direct DC coupled connection to the
FM modulator, and it needs to be true FM. If the transmitter is actually
phase modulated (and many are), you'll have problems unless you use
a data scrambler to keep the average DC level near zero.

But the simple wireless mics usually are direct FM, so all you have to do
is go directly in and attach your signal to the modulator varactor. You'll
need a resistive divider to knock the TTL down to the level required to give
you the desired FSK shift of the transmitter. (Plus and minus 75 kHz for a
simple FM wireless mic used with a FM broadcast receiver.)

You will also need a slicer circuit at the receiver to recover the signal
voltage swings coming out of the receiver discriminator. This also means
you need a direct DC connection to the discriminator. You can't just take
the signal from the speaker or headphone jack. (Actually this circuit isn't
really a slicer in this case since you want to directly feed a PC RS232 port.
What it has to do is amplify the voltage swings out of the discriminator to
at least +/- 3 volts and invert polarity to conform to RS232 specifications,
ie a 1 is a negative 3 to 12 volts, a 0 is a positive 3 to 12 volts in the RS232
spec.)

It will be useful if the receiver has a squelch circuit you can modify to
provide DCD to the PC. Otherwise it will be trying to read interstation
noise when the transmitter is off. This random data could cause overruns
of the PC serial port UART.

While the surgery to the radios is usually relatively minor (though it can get nasty with some radios), and the slicer is easily made with a single opamp, you can avoid having to modify the radios if you use modems.

The modems (Bell 202) will generate and decode two different audio tones representing 1 and 0 respectively. So you can simply feed this audio signal into the transmitter microphone jack and out the receiver headphone jack to the receiving modem with no modifications to the radios.

Bell 202 modems are available as a single chip with TTL inputs and outputs, but you will need a TTL to RS232 conversion at the receiving end to drive the PC serial port. That is also available as a single chip. So at the transmitter you need one chip, at the receiver you need two. Plans to build Bell 202 modems have appeared in the ARRL Handbook and other places.

Either method will work. Using the modems avoids having to modify the radios. Doing direct FSK is conceptually simpler, but there are some practical problems which usually mean you'll have to fiddle with it a fair bit to actually get it to work right. The modem solution is nearly plug and play.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

334. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: "Al Lorona, Jr." <al_lorona@agilent.com>
Message-ID: <387D70A0.75B3@agilent.com>
Source record: 64240
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Gary Coffman wrote:

> But the reason the meter *does* kick is that the voice modulating signal
> isn't either a 50% duty cycle square wave or a symmetric sinewave.
> Part of this is due to the nature of the vocal waveform itself. It is complex,
> often asymmetric, and most definitely not a pure sinewave.

Hi, Gary,

For the curious who want to see what you're talking about here, check out the article entitled, "Lop-Sided Speech and Modulation," by George Grammer, W1DF, QST for February, 1940. It deals with just this scenario and points out the distortion that can occur in an AM transmitter if attention is not paid to voice wave polarity.

R,

Al W6LX

--

While you're passing out the spam, don't forget these guys:

admin@loopback
$LOGIN@localhost
$LOGNAME@localhost
$USER@localhost
$USER@$HOST
root@mailloop.com
Chairman William Kennard: wkennard@fcc.gov
Commissioner Susan Ness: sness@fcc.gov
Commissioner Harold Furchtgott-Roth: hfurchtg@fcc.gov
Commissioner Michael Powell: mpowell@fcc.gov
Commissioner Gloria Tristani: gtristan@fcc.gov
US Postal Service: customer@email.usps.gov
Fraud Watch: fraudinfo@psinet.com
Federal Trade Commission: consumerline@ftc.gov

335. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <387BD320.6AAF80ED@hotmail.com>
Source record: 64291

I hate to say it, well actually I don't. Most of the radio & electronics hobbyist magazines I've read are absolute rubbish. The one exception I can think of is the Brit mag -Practical Wireless-. If you want some meat and potatoes radio technical digest, you'll have to subscribe to some of the trade journals that deal with broadcast, mobile and microwave radio. They are free to those in the industry - and well worth the price! :->

MC

PS: Which idiot was it that started this -contesting- thing?

John Crabtree wrote:

> Hello All
>
> I had a letter today from the ARRL saying that they had purchased
> Communications Quarterly magazine from CQ publications, and would be combining
> it immediately with QEX.
>
> Farewell to an excellent magazine. It is a sign of the times.
>
> 73
>
> John. KC0GGH

336. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <387BD3F1.B7DC4B81@hotmail.com>
Source record: 64292

It is two meters together. (duh) If you're on a homebrew kick, just get two surplus meters that are the same and fabricate your own scale. Better yet, make it an active meter and design a circuit to calculate the VSWR and display this on one meter.

MC.

"Randall D. DuCharme" wrote:

> Greetings,
>
> For one of my first ham projects I'm going to build an antenna tuner.
> Does anyone know of a source for those cross needle meters like MFJ and
> others use? I really like the way they look.
>
> Thanks
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email
> address.
> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a result of posting to these newsgroups, I find no other
> easy
> solution.
> --
> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>
> Unsolicited commercial email (SPAM) received at this email address
> will not be tolerated. All spam is subject to a $200 per incident
> processing fee and possible legal action pursuant to federal
> regulations.

337. Pin Description of ALPS Sat-Tuner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-12 00:00:00 UTC
From: Peter Bolch <nc-bolchpe@netcologne.de>
Message-ID: <85h44g$90h$1@news.netcologne.de>
Source record: 64293

Hi,

I'm looking for the pin description of the ALPS sat-tuner module BSJE3-1D1A.
I hope this is the correct part number. The second number on the module is
3N1521A.

BTW: What's the IF frequency of such tuners?

Peter

338. Re: TS-140S error please help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387d20aa.184639436@news.online.no>
Source record: 64144

On Wed, 12 Jan 2000 14:17:35 -0800, Bear <nospam@nospam.org> wrote:

>x-no-archive: yes
>
> Looks like your
> spelling AND grammar could use some work there

> I find it extremely difficult to engage in an intellectual battle

Question: What do you call someone who speaks three languages?
Answer: Trilingual.

Question: What do you call someone who speaks two languages?
Answer: Bilingual.

Question: What do you call someone who speaks one language?
Answer: An American.

339. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000112203417.01797.00000274@ng-ca1.aol.com>
Source record: 64145

>Hello--
>From a free-lance writer's viewpoint, the CQ family of magazines has always
>paid its
>
>writers very slowly-- sometimes, it took a year or more for them to send a
>payment
>check.

>Brad AA1IP
>

Hi Brad--

The worst part was the way you were made to feel like a worm for even bringing it up. Or lied to about when the payment would actually arrive.

I was VERY naive about this and trusted them.

I had to wait up to 18 months for payment. That was it: I withdrew all my MS's.

Peter Taylor dropped his column for the same reasons.

Treating your writers poorly is a formula for disaster, obviously not a lesson learned properly.

Comm Quart had its problems and had its moments, but its path to 'defunct' could have easily been avoided by using the writers to generate more subscribers. Instead it relied--heavily--on the --opinions-- of just a few people, and now those people aren't part of QEX/Comm.Quart.

I don't think we should confuse inappropriate judgement with 'dark days upon us'. We, the buyers of ham magazines, determined this outcome ourselves. The people have spoken--through their wallets and pocketbooks.

No one is a victim of circumstances here--economic times are booming and people can afford a Comm. Quart. at the newsstand. The question has instead become--why? As in why bother?

I bet QEX now grows substantially as fresh efforts are being made to revive it, and a great new editor takes charge.

Best of luck to ARRL in the enterprise!

73,
Chip N1IR

340. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <387D2EEB.E2E762E9@hotmail.com>
Source record: 64146

Michael Black wrote:

> It's in more recent decades that contesting has become an edn product,
> and one that often seems to require more stamina than technical skill.

I'm trying to think of how stamina and filling the air waves with rubbish contributes to the betterment of the hobby and drawing a blank. I guess the art of conversation is indeed dead. :-<

MC

341. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <387D3041.6055145E@hotmail.com>
Source record: 64147

phil wrote:

> Thanks for giving PW a note of praise.
> It is a good read.

I pick it up when I'm over the pond - which is frequent.

> I thought you had Pop Comms to cater for the general hobbyist, SWL and
> low power radio enthusiasts?

If you are referring to Popular Communications, I gave up on that magazine years ago. It just doesn't have any -bite- to it. It seems to be aimed at joe-newbie SWL more than anything else. Nuts & Volts is a good one, but I haven't seen it around in a couple of years. If they are still going they should invest some money in marketing.

MC

342. FS: RF xistors, tunnel and schottky diodes, capacitors and much more

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: bw201@torfree.net
Message-ID: <Fo957n.l4I.0.queen@torfree.net>
Source record: 64148
Cross-posted to: rec.radio.swap,alt.ham-radio.marketplace,rec.radio.amateur.homebrew,alt.electronics,uk.radio.amateur

Reduced prices and improved, much easier to read format.
http://www3.sympatico.ca/aquariusr/sale1.htm

A friend has set up a web site for me to sell off a 28 year accumulation
of electronic components including:
a Coaxial Power switch,
RF power and other transistors, RF I.C.'s,
1N3712 Tunnel diodes,
1N5711 Schottky diodes,
Ceramic 455kHz and 10.7MHz filters,
Minicircuits mixers,
variable capacitors, both panel mount shaft type and trimmer
variable inductors and coil forms,
High voltage vacuum relays, rectifiers, resistors and capacitors,
Other capacitors including, Photoflash, polypropylenes, and tantulums,
Switches, such as foot switches and industrial limit (micro) switches,
Ferrites beads and cores,
Transformers and inductors,
and lots, lots more.

Bob Levitt

343. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: m_man54@hotmail.com
Message-ID: <387d5d54.7011215@news.gte.net>
Source record: 64149
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

On Wed, 12 Jan 2000 09:19:03 -0500, JGinNY <jgovost1@twcny.rr.com>
wrote:

>When plate-modulating an RF amplifier (according to the ARRL Handbook)
>there should be no noticeable change in the plate current of the AMP
>when modulation is applied. This being due to the effects of
>cancellation from the next half-cycle of the modulated wave. Or
>something like that.
>
>Somewhat confused here: Granted, a milliammeter cannot follow the rapid
>changes in the af (modulation), but then how/why can you "see" the plate
>current of a *modulator* tube kick up on voice peaks? The current
>variation is clearly visible there.
>
>What is the difference between these two situations?
>
>Many thanks for any help...
>[Pls reply to newsgroup, or if directly, to <jwgbee@hotmail.com> (not
>the address above) thanks]
>
>73,
>J.
>n1aep
>

Every tube AM broadcast transmitter I ever worked had plate current
kick under modulation. In theory you would not have this for linear
& symetrical audio. However voice &/or music is not symetrical and
inthe case of broadcast the audio processing is purposley
non-symetrical. Broadcaster try to reach +125 % -100% modulation
peaks on a mono AM station. 5% less for stereo operation...

So is you turn down the mic gain on your 3880 Khz station until that
pair of 3-500Zs you are running in the final, don't have any *Kick*
you will not be hitting any where near 100% on peaks.

Ron

344. Re: 4X1000 & 4X1500????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <3kef4.3643$KP.190277@tw12.nn.bcandid.com>
Source record: 64150

In article <387C01B6.44F59BE7@NO-SPAMtcainternet.com>,
randyd@NO-SPAMtcainternet.com says...
>
>Greetings
>
>I have a chance to buy a couple of each. Problem is I can't determine
>what they are. I can't find pinouts, datasheets, or anything on them.
>Are they simply non-ceramic versions of the 4CXxxx variety (like the
>4X150 is to the 4CX250... etc) or are they something different
>altogether?
>
>
the 4X1000 and 4X1500 most probably are a glass seal version of the
CX tubes. Neither of them is listed in current Eimac/Varian literature.
However, I own some 3X2500's. They are glass seal tubes and also are
no longer listed. So, should you buy them? Well, glass seal tubes tend
to 'gas' a little quicker than ceramic. What is their age and service
record? Will they glow like a mercury lamp when you fire them up?

345. Re: 4PR400A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <bpef4.3646$KP.190277@tw12.nn.bcandid.com>
Source record: 64151

In article <387C0269.EBD79547@NO-SPAMtcainternet.com>,
randyd@NO-SPAMtcainternet.com says...
>
>Greetings,
>
>How does a pulse rated tube compare to a non-pulse rated unit? Output?
>Capacitance? Are they 'plug&play' compatable??? ;-) <bad joke... I
>know>
>
>
Most of the 'PR' tubes are radically differant from their 'rf'
brothers. Compare the ratings and looks of a 4-250 to a 4PR250.
Monsterously differant. However, strangely enough, the 4-400 and
4PR400 are almost identical in construction. The filament ratings
are identical, but i suspect the 4PR400 has a much higher 'peak'
emission capability. You have picked the one tube that is very
similar, and may be a good swap. I have not however tried it.

346. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <jBef4.3659$KP.190277@tw12.nn.bcandid.com>
Source record: 64152
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

In article <387C8CF6.877EBB60@twcny.rr.com>, jgovost1@twcny.rr.com
says...
>
>When plate-modulating an RF amplifier (according to the ARRL Handbook)
>there should be no noticeable change in the plate current of the AMP
>when modulation is applied. This being due to the effects of
>cancellation from the next half-cycle of the modulated wave. Or
>something like that.
>
>Somewhat confused here: Granted, a milliammeter cannot follow the
rapid
>changes in the af (modulation), but then how/why can you "see" the
plate
>current of a *modulator* tube kick up on voice peaks? The current
>variation is clearly visible there.
>
>What is the difference between these two situations?
>
O.K., there were several answers all similar stating very little
change in 'plate' current. I observe this to be true. In practice
if I see 1 amp at 0% a.m. modulation, I usually see 1.1 amp or
slightly less at 100% modulation. But, would you like to see the
effects of modulation on your output power? Look at the 'antenna
current', or 'common point' current meter. Or, here is something
else, suppose you only have a 'cathode current' meter, and not
a 'plate current' meter. The cathode current behaves similar to
the common point current meter, and does deflect upward, I seem
to recall about 15% or so on music.

347. Re: S-100 Processor board or modem board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <mRef4.3668$KP.190277@tw12.nn.bcandid.com>
Source record: 64153
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In article <85ilei$lju@news1.snet.net>, ChipsnDips@snet.net says...
>
>I'm looking for an S-100 processor board or an S-100 modem board
(both). If
>you have one or both and interested in selling please contact me
directly at
>chipsndips@snet.net
>
>Alan
>
Please check the whereabouts of Christopher Titus located in
Blacksburg Virginia. He opened a museum for older computers, and
I would guess gets calls from folks wanting to donate. He may be
able to 'give' you some of the surplus. He had imsai's, altairs,
intellect's, and almost one of everything with 6800, 8008, 8080,
etc. best luck.

348. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <387DCBB0.16DC0D11@twcny.rr.com>
Source record: 64154
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

THANKS, YOU GUYS for the clarification and most interesting discussion!
You've all been a big help in understanding this topic (and the theory vs.
"real world" operating conditions).

vy 73,
Joel

reply addr.: <jwgbee@hotmail.com>
jwg6@cornell.edu

349. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <Skkf4.2181$3b6.11579@ozemail.com.au>
Source record: 64155

The best tech magazine was "Ham radio"(vale). What a pity this one went under, it was crammed full of different articles. I think this is where QEX is a let down, it has so little and is poor value for money. Why cant they put those same articles in QST? They seem to be elitist in their thinking. Besides most of the article of technicle substance would not make QEX or QST, since it seems that the editors seemed to be controlled in the favour of the advertisers. Anything critical of good design and anything that points to the crap sold by the manufacturers seems to get killed. The ARRLS favourite company seemed very prominent in the recent license changes. Did any ARRL members get a courtesy letter asking them?

Fractenna <fractenna@aol.com> wrote in message
news:20000112203417.01797.00000274@ng-ca1.aol.com...
> >Hello--
> >From a free-lance writer's viewpoint, the CQ family of magazines has
always
> >paid its
> >
> >writers very slowly-- sometimes, it took a year or more for them to send
a
> >payment
> >check.
>
> >Brad AA1IP
> >
>
> Hi Brad--
>
> The worst part was the way you were made to feel like a worm for even
bringing
> it up. Or lied to about when the payment would actually arrive.
>
> I was VERY naive about this and trusted them.
>
> I had to wait up to 18 months for payment. That was it: I withdrew all my
> MS's.
>
> Peter Taylor dropped his column for the same reasons.
>
> Treating your writers poorly is a formula for disaster, obviously not a
lesson
> learned properly.
>
> Comm Quart had its problems and had its moments, but its path to 'defunct'

> could have easily been avoided by using the writers to generate more
> subscribers. Instead it relied--heavily--on the --opinions-- of just a few
> people, and now those people aren't part of QEX/Comm.Quart.
>
> I don't think we should confuse inappropriate judgement with 'dark days
upon
> us'. We, the buyers of ham magazines, determined this outcome ourselves.
The
> people have spoken--through their wallets and pocketbooks.
>
> No one is a victim of circumstances here--economic times are booming and
people
> can afford a Comm. Quart. at the newsstand. The question has instead
> become--why? As in why bother?
>
> I bet QEX now grows substantially as fresh efforts are being made to
revive it,
> and a great new editor takes charge.
>
> Best of luck to ARRL in the enterprise!
>
> 73,
> Chip N1IR

350. Re: S-100 Processor board or modem board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Bert Douglas <bertdNOSPAM@bellsouth.net>
Message-ID: <pjlf4.7859$lb5.101272@news3.mia>
Source record: 64156
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have a complete S-100 desktop box.
It has a Z80 processor at 6MHZ and
64K of ram and dual 8 inch floppies.

It worked the last time I plugged it in.
That was about 15 years ago.
I can't remember the brand.
It was not one of the early famous brand names.

Anyone interested?

351. Re: Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: lagniappe <lagniappe@my-deja.com>
Message-ID: <85krgi$2un$1@nnrp1.deja.com>
Source record: 64157
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <387cfa28$0$60721@news.voyager.net>,
"Mark Erbaugh" <mark@nospam.microenh.com> wrote:
>
> > I looked at the SP-1B as you noted, but it appears to me that
> > this radio is not a single-crystal rig. The illustration shows
> > two crystals on the radio. The "spider junior" appears to be
> > a single crystal, but if you read the ad copy you see that it
> > only uses the crystal for transmit - receive is not crystal-
> > controlled. As I noted, I'm looking for a scheme that uses some
> > sort of offset or pulling to get the double-duty.
> >
> Martin
>
> The SP-1B has two crystal sockets, but this is to provide you with two
> transmit frequencies (on the same band). You don't have to install
both
> crystals. There is a DPDT switch to select one or the other. The
receive
> tuning is actually RIT and is achieved by a pot connected (through
some
> other components) to the crystal, so I suspect that it is some sort of
> 'pulling'.
>
> 73,
> Mark
>
>

OK, that sounds more like what I'm looking for.

Thanks,

Martin

Sent via Deja.com http://www.deja.com/
Before you buy.

352. "Potted"/blown(?) pwr transformer -- no good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <387DF0D7.DF7560C1@twcny.rr.com>
Source record: 64158

Got a 110V-to-600v transformer in a small 60's vintage transceiver; may be blown. There was a short in the pwr supply at one point, big sparks and lots of smoke!

Black deposit on cloth covered leads, just where they exit the metal tfmr housing.
Still appears to yield proper voltage on secondary, and rig receives fine, but loud raspy hum in audio on transmit.
(btw, All new replacement filter caps in pwr supply circuit.)

Is it likely the transformer is damaged, and could it be in part causing the 60 cycle crud?

tnx.
J.
(any direct replies to <jwgbee@hotmail.com>, pls -- not address above)

353. Cryatal sources???? Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: kb9e@aol.com
Message-ID: <20000113110212.04625.00000061@ng-fc1.aol.com>
Source record: 64159

I haven't needed a crystal in years and would appreciate any info on who is supplying rocks these days. I'm lookg for a 59mhz crystal in a HC-49 style case to make an input freq shift on my TenTec 1210 2 meter transverter.

Thanks for the help!

Ron
KB9E

354. Re: "Potted"/blown(?) pwr transformer -- no good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <6Umf4.8$0l4.383@tw12.nn.bcandid.com>
Source record: 64160

In article <387DF0D7.DF7560C1@twcny.rr.com>, jgovost1@twcny.rr.com
says...
>
>Got a 110V-to-600v transformer in a small 60's vintage transceiver; may
>be blown. There was a short in the pwr supply at one point, big sparks
>and lots of smoke!
>
>Black deposit on cloth covered leads, just where they exit the metal
>tfmr housing.
>Still appears to yield proper voltage on secondary, and rig receives
>fine, but loud raspy hum in audio on transmit.
>(btw, All new replacement filter caps in pwr supply circuit.)
>
>Is it likely the transformer is damaged, and could it be in part
causing
>the 60 cycle crud?
>
>tnx.
>J.
>(any direct replies to <jwgbee@hotmail.com>, pls -- not address above)
>
I would not condem the transformer just yet. When the 'main'
portion of the power supply smoked, you may have fixed the 'obvious'
but look farther. Did it also wipe out a bias supply? What about
caps in the screen supply. Maybe one of them opened during the surge.
How about any resistors in the center tap to ground. Just to many
possibilities to mention after a power supply melt down. Perhaps
on side of the bridge is open. That would give clean power for receive,
but under high current demands of transmit, you would have more ripple.
73

355. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387E01ED.6301983F@agilent.com>
Source record: 64161
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

J M Noeding wrote:

>
> we used to buy "cheap foreign crap" from Polypak some years ago,
> believe it was made in America, later we got low-priced but high
> quality European semiconductors
>
> Jan-Martin LA8AK

Yes, I was going to make a comment that the "cheap foreign crap" should not be confused with the "very high quality foreign parts" that I more commonly deal with. Don't look too closely: the Motorola parts may well have been made in Taiwan or some other country. The Burr-Brown OPA2134s in my hand were made in Taiwan. Same with the Texas Instruments TLC555s. I recall having to wait a week for samples of the National LM6172 (IIRC) because they had to be shipped from overseas. I wonder if the AKM5352s I have here were made in Japan, Korea, Taiwan, or maybe even the US. It's a global economy, and those unwilling to acknowledge it are the poorer for it, IMO. (I still sometimes use a frequency counter I built from PolyPaks floor sweepings in the early 70's, so even cheap foreign/domestic crap sometimes manages to be OK! ;-)

Cheers,
Tom

356. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387E02CE.78878869@agilent.com>
Source record: 64162
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Bear wrote:
(re J M Noeding)

> It looks like you
> did not excel in English grammar, either.....Or do you speak "Ebonics"?
> <LOL>

Perhaps you'd rather make your exchanges with my friend Jan-Martin in Norwegian? I'm sure he'd have no trouble accomodating you.

Cheers,
Tom

357. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <387DFD26.376381A@valley.net>
Source record: 64163
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

J M Noeding wrote:

> On Wed, 12 Jan 2000 13:45:20 -0800, Bear <nospam@nospam.org> wrote:
>
> >x-no-archive: yes
>
> >J M Noeding wrote:
> >>
> >> On Wed, 12 Jan 2000 10:53:51 -0800, Bear <nospam@nospam.org> wrote:
> >>
> >> >These were high quality USA manufactured transistors by Motorola, not
> >> >the cheap foreign crap that is currently on the market.
>
> >>
> > I prefer to purchase goods that are made in a civilized democratic county
> >>
> >>Perhaps you suffers from the "not-invented-here-syndrome"?
> >>
>
> we used to buy "cheap foreign crap" from Polypak some years ago,
> believe it was made in America, later we got low-priced but high
> quality European semiconductors
>
> Jan-Martin LA8AK

Hello--

Poly-Pak sold rejects, end-of-production lots, contract-termination components and other
surplus-- sometimes, one could find real bargains in a package, but all too often the
purchaser received the rejects. Poly-Pak's slogan was, "We bot (sic) thousands... no time
to test!". Poly-Pak may have had no time to test, but the manufacturer did....

My favorite item: optoisolators P-P advertised as , "sensor or emitter may be good-- o
both" <giggle>.

Poly-Pak was located in Wakefield, MA, not far from Transitron Co.-- which supplied many
of P-P's "bargain" components. Transitron did not enjoy a good reputation as a
semiconductor supplier, IIRC.

But even the best vendors screw up-- a company I once worked for as a components engineer
used Motorola's 68000 processors, which were in short supply in the early 1980s. One day,
we received a shipment, and my inspector called me. "I think you'd better have a look at these..."

Devices in the shipment either carried no stamped part numbers, or were clearly stamped
"REJECT" in big letters. Motorola had shipped us the jeject bin's contents in order to make
the delivery commitment. So, even Zeus nods-- cut him a little slack<g>.

73,
Brad AA1IP

358. Re: Cryatal sources???? Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387E0373.5333D9E3@agilent.com>
Source record: 64164

Both International Crystal and JAN Crystal should be able to help you.
Both have 1-800 numbers last I checked.

Cheers,
Tom

KB9E wrote:
>
> I haven't needed a crystal in years and would appreciate any info on who is
> supplying rocks these days. I'm lookg for a 59mhz crystal in a HC-49 style
> case to make an input freq shift on my TenTec 1210 2 meter transverter.
>
> Thanks for the help!
>
> Ron
> KB9E

359. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387E041B.5FE25B7E@agilent.com>
Source record: 64165

I've always found that macromodels for other than op amps are fairly rare. When I need something like that, I can generally make some reasonable engineering simplifications and put together my own model that works well for the particular application I'm working on. If you don't find a model, you might consider that.

Cheers,
Tom

JW wrote:
>
> I have been searching in vain for a SPICE model for the 4046 PLL, anyone
> care to point me in the right direction?

360. Hammond Mod xfmr help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Paul <bush_pilot@my-deja.com>
Message-ID: <85l4p9afm1@nnrp1.deja.com>
Source record: 64166
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi folks,

I have a brand new Hammond modulation transformer model 2310
that I need connection info for please.
I have contacted Hammond and they say they don't have a file on it.
It's too old. If you have an old catalog from the 40's- 60's and have
a moment to look up what the 12 terminals are, I would be very grateful.
Z ratio, power, pri/sec Z etc.

Thanks,

Paul

email (remove ZZZ) pwende@ZZZaimtronics.com

Sent via Deja.com http://www.deja.com/
Before you buy.

361. Hammond Mod xfmr help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Paul <bush_pilot@my-deja.com>
Message-ID: <85l4rc$ag6$1@nnrp1.deja.com>
Source record: 64167

Hi folks,

I have a brand new Hammond modulation transformer model 2310
that I need connection info for please.
I have contacted Hammond and they say they don't have a file on it.
It's too old. If you have an old catalog from the 40's- 60's and have
a moment to look up what the 12 terminals are, I would be very grateful.
Z ratio, power, pri/sec Z etc.

Thanks,

Paul

email (remove ZZZ) pwende@ZZZaimtronics.com

Sent via Deja.com http://www.deja.com/
Before you buy.

362. FS: 6080 Tubes, $1.50 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <85l2fi$2n1u$1@newssvr04-int.news.prodigy.com>
Source record: 64168
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I have 62 used type 6080 tubes that were pulled from government surplus HP equipment. these are untested & are sold as is, for $1.50 each. I have a 10 page list of other tubes I have accumulated over the last 46 years, e-mail me at m.pasternack@prodigy.net for a copy. Murray, W6KRC

363. TEKTRONIX 2235

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: cbooi@tm.net.my
Message-ID: <38842cfd.5360056@news.maxis.net.my>
Source record: 64169

Dear Friends

I am looking for the circuit diagram / Service Manual on the Tektronix 2235 scope.

The power supply is down.

I will glady reimburse for the assistance rendered.

God bless!

Adrian C. B. Ooi

cbooi@tm.net.my

364. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <85lhvr$n86$1@bgtnsc02.worldnet.att.net>
Source record: 64170

The poster was interested in cross needles, not separate movements.
Why did you trash him with your (duh) statement and discourage him?
I wish Randall luck with his homebrew activities.
Al

MC 10kW Jesus wrote in message <387BD3F1.B7DC4B81@hotmail.com>...
>It is two meters together. (duh) If you're on a homebrew kick, just get two
>surplus meters that are the same and fabricate your own scale. Better yet,
>make it an active meter and design a circuit to calculate the VSWR and
>display this on one meter.
>
>MC.
>
>
>
>"Randall D. DuCharme" wrote:
>
>> Greetings,
>>
>> For one of my first ham projects I'm going to build an antenna tuner.
>> Does anyone know of a source for those cross needle meters like MFJ and
>> others use? I really like the way they look.
>>
>> Thanks
>>
>> NOTE: To reply directly to me, please remove NO-SPAM from my email
>> address.
>> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
>> received as a result of posting to these newsgroups, I find no other
>> easy
>> solution.
>> --
>> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>>
>> Unsolicited commercial email (SPAM) received at this email address
>> will not be tolerated. All spam is subject to a $200 per incident
>> processing fee and possible legal action pursuant to federal
>> regulations.
>

365. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <85li1pndf1@bgtnsc02.worldnet.att.net>
Source record: 64171

Is this rec.radio.amateur.appliance buyer?
Al

Bob wrote in message ...
>Buy one from MFJ.
>
>73, Bob K6DDX
>
>

366. Re: Looking for relay for t/r switch 144-432

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387d222c.185025438@news.online.no>
Source record: 64172

On Thu, 13 Jan 2000 00:13:53 GMT, timp@kf4fco.com wrote:

>I'm building a mast mounted preamp and looking for a t/r relay that
>would handel 200 to 300 watts thanks tim

a very common quarterwave line circuit using a Unitrode UM9401 with bias during transmit will work (two smaller diodes in anti-paralell on RX side,2* BA282 or similar will work), it does not hurt to feed the current through the diodes on TX port ant RX port, but if you wish to use higher power, say 5kW, you may still use the Unitrode diode, see SM5BSZ's site. You may search for SM5BSZ or G3SEK, it is a path from G3SEK's site

it is principally possible to use a quarterwave line circuit on 2m for 70cm, the coax cable length are not at all critical, but must be n'th odd order quarterwaves on 70cm, not too close to even order.

Have seen some very accurate calculations for 2m lines (switches up to few hundred watts), they are probably described by somebody who haven't tried more than the one described, and have probably not measured any losses. I have made and used almost a douzen two metre switches and a few for 70cm packet radio.

73 Jan-martin LA8AK

367. Re: equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.dbf3da497f.a70320igor@argonet.co.uk>
Source record: 64173
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

> >(snip) What did I screw up? (snip)
The equations you used are correct for a series connection of a
> resistor and an inductance. For a parallel connection the equation is
> different.
>
> For a parallel connection of X and R you get:
>
> Z=1/[(1/R)+(1/X*i)] where i=sqrt(-1) and X=2*Pi*F*L
>
> Z=[(R*X^2)/(X^2+R^2)]+i*[(R^2*X)/(X^2+R^2)]
>
> Now the part multiplied by "i" is the equivalent inductive reactance (Xeq)
> of the parallel circuit, and the remaining part is the equivalent
> resistive (Req) part.
>
> The Q is still calculated by X/R, but in the parallel case it is Xeq/Req,
> which yields
> R/X, for the paralleled inductive reactance and resistance.
.....
Cheers, Leland. Nice to see a really helpful post to a ham in need!

After a number of false starts, I followed out your equations and got the
right answer, too.

In parallel, the bigger the resistance, the higher the Q,
in series, the higher the resistance the lower the Q

So all is as expected!

73 de G3CCL

--

__ __ __ __ __ ___ _____
|__||__)/ __/ \|\ ||_ | /
| || __/__/| \||__ | /...Internet access for all Acorn RISC machines
_____/ igor@argonet.co.uk

368. Re: "Potted"/blown(?) pwr transformer -- no good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <387E5CE9.E8FA9E79@twcny.rr.com>
Source record: 64174

OK, thanks. will check out those possibilities. You may be right about
the bias supply or rectifiers, especially.
Oh, and by the way, it is a 150 v secondary on the tfmr (not 600V!),
followed by a voltage doubling circuit to bring B+ up to 300V.
Do appreciate the suggestions.
73 OM

gudmundur wrote:

> but look farther. Did it also wipe out a bias supply? What about
> caps in the screen supply. Maybe one of them opened during the surge.
> How about any resistors in the center tap to ground. Just to many
> possibilities to mention after a power supply melt down. Perhaps
> on side of the bridge is open. That would give clean power for receive,
> but under high current demands of transmit, you would have more ripple.
> 73

369. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387E5E91.CAF33C48@agilent.com>
Source record: 64175
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

I'll stand by my original statement, with one clarification. "Will not change" should be taken to mean that the average value stays constant. Any transformer-coupled modulation-even assymetrical voice waveforms-will have zero DC content, and a change in the average (DC) current from the RF amplifier plate supply must be because of nonlinearities (or time variations) in the modulated amplifier, perhaps because of overmodulation. You'll see the plate current meter move--flicker--if the modulation frequencies are low enough compared with the meter movement's ability to track change, and you'll see it move if the amp isn't perfectly linear under modulation.

*** But in any event, the key point of my first posting in the thread is that the RF power output will change drastically more than is indicated by the (average-reading) RF amplifier plate current meter. My square-wave modulation example doubled the RF output power; there certainly is not anything like a doubling of the plate current in any amplifier even remotely close to linear under those conditions. For 100% sinewave modulation, similarly, you might see a few percent change in the plate current because of nonlinearities, but not the 50% change that would be implied by the 50% increase in RF power output. ***

Clearly there are all sorts of nonlinearities that can come into play: an RF stage that's incapable of +100% modulation, trying to drive to more than 100% in the negative direction, and "controlled-carrier" systems that change the operating conditions of the RF stage to increase carrier power during modulation. But again, the point is that with a linear system, you see increased RF output power with no increase in RF plate supply DC current, and the additional power comes from the modulation audio signal itself.

Cheers,
Tom

Gary Coffman wrote:
>
> On Wed, 12 Jan 2000 13:03:15 -0800, Tom Bruhns <tom_bruhns@agilent.com> wrote:
> >You're right that with linear modulation with zero DC content, the
> >current from the plate supply of the plate modulated stage will not
> >change.
>
> But the reason the meter *does* kick is that the voice modulating signal
> isn't either a 50% duty cycle square wave or a symmetric sinewave.
> Part of this is due to the nature of the vocal waveform itself. It is complex,
> often asymmetric, and most definitely not a pure sinewave. Another part

> of this may be due to distortion products introduced in the speech
> amplifiers, or in the modulation process itself, ie you could be flattopping.
>
> It isn't unusual to see *some* variation in the plate current under modulation
> simply due to the characteristics of the vocal waveform. But if you're seeing
> a lot, you've probably got problems. An exception to this would be a transmitter
> using controlled carrier modulation. In that case, you do see plate current
> variations with modulation *by design* (carrier amplitude is varied so that
> it is just sufficient to prevent overmodulation at any modulating level). This
> is perfectly normal behavior for this type of transmitter. A few amateur
> rigs do AM this way.
>
> Gary
> Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
> 534 Shannon Way | We break it |
> Lawrenceville, GA | Guaranteed |

370. IC-751

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <9otf4.57398$Ke.54194@news21.bellglobal.com>
Source record: 64176
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Does anyone know where I could buy or get a copy of the manual for the Icom IC-751? Thanks.

371. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <387E6558.7304FA4E@eznec.com>
Source record: 64177

Communications Quarterly is the successor to Ham Radio. How well it's filled those shoes is a matter of opinion, but most I've heard seem favorable.

QST has the unhappy and impossible job of satisfying the extremely diverse interests represented by the ARRL membership. It might seem to readers of newsgroups like this one that everyone is interested in technical matters. In fact, though, only a tiny fraction of amateurs are really interested in technical material of the level found in QEX or Communications Quarterly. So putting this material into QST in place of content which is of interest to a much larger fraction of the readers would be a foolish thing for the ARRL to do, much as you and I might like it.

Roy Lewallen, W7EL

I am:
A life ARRL member
An ARRL Technical Advisor
A QST advertiser
A Communications Quarterly advertiser (soon to be a QEX advertiser)

and I have written technical articles for QST and other ARRL publications.

wb wrote:
>
> The best tech magazine was "Ham radio"(vale). What a pity this one went
> under, it was crammed full of different articles. I think this is where QEX
> is a let down, it has so little and is poor value for money. Why cant they
> put those same articles in QST? They seem to be elitist in their thinking.
> Besides most of the article of technicle substance would not make QEX or
> QST, since it seems that the editors seemed to be controlled in the favour
> of the advertisers. Anything critical of good design and anything that
> points to the crap sold by the manufacturers seems to get killed. The ARRLS
> favourite company seemed very prominent in the recent license changes. Did
> any ARRL members get a courtesy letter asking them?

372. FS: Amplifiers, Tubes and Test Gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <387E8AAB.24A309C4@carroll.com>
Source record: 64178
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.swap,sci.electronics.equipment,rec.radio.amateur.homebrew,rec.audio.tubes

All prices plus shipping from 07657.

1.) Pair of Bogen MO-100 monoblocks. These are the early version that uses 6550's, rather than 8417's. With mounting rack. 100 watts/channel tube power amps. Sound great--recently rebuilt (3 months ago) with modern electrolytics and Svetlana 6550C tubes. $350 for the pair.

2.) Good, used, tested Amperex ECC88/6DJ8 "Bugle Boy". Pulls from test equipment. $10 each

3.) RCA 810 triode. JAN type CRC-810. Pull from unused equipment. $40 --With Johnson socket and Triad F-33U filament tranny $55

4.) Penta Labs PL-254W Triode. Pull from unused equipment. $25

5.) 2 pcs 4E27A/5-125B pentodes. 1 Eimac, 1 Sylvania. Both are NOS, but Eimac box is missing. $30 each or $50 for the pair.

6.) Westinghouse 5CX1500A pentode. Pull from working equipment. Tube tests good. $75

7.) RCA radiotron UV-201A Used, tests good. Brass base early triode. With bakelite "breadboard" socket. $30

8.)Modified Techron 8521 power amp in roll-around 19" EIA rack. Can deliver
over 5kW into a 2 ohm load. Frequency response DC-50kHz. +/-140V output.

Unit was a pull from an MRI scanner, and has been modified to operate from single phase 208-240 VAC power. All modifications professionally done. (Original xfmr, filters, rectifier removed, and replaced with fully rated single phase equivalents) Possible uses:

Motor driver
ELF transmitter
Shake/vibration testing
Stadium/Concert hall PA system
General scientific research

Or use it as the biggest subwoofer amp on the block! Just the thing to wake the neighbors up! :)
Best offer over $700 takes it. Unit is located in Northern NJ, and will deliver within 50 mile radius, or you can pick it up. This thing is HEAVY, but will ship via truck if desired (at buyers expense for shipping and crating).

9.) HP 651A Audio Oscillator. 10Hz-10MHz sine wave. 19" Rack Mountable
Good condition. $60

10.) Boonton Radio (HP) 202H RF generator 54-216 MHz AM/FM Rack Mount
Good condition $50

11.) Tektronix R5103 oscilloscope. Mainframe is in good working
condition. Accepts all 5000 series plugins. Comes with 5A16 dual trace
amp and 5B10 timebase. Plugins need work. $25

Thanks for the Bandwidth...
Bob Weiss N2IXK

373. Re: equasion for Q given freq, inductance, resistance

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <85m5nb$kcv@nnrp2.farm.idt.net>
Source record: 64179
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.policy

"Mr G H Ireland" <igor@argonet.co.uk> wrote in message
news:na.dbf3da497f.a70320igor@argonet.co.uk...
>
.....
> Cheers, Leland. Nice to see a really helpful post to a ham in need!
>
> After a number of false starts, I followed out your equations and got the
> right answer, too.
>
> In parallel, the bigger the resistance, the higher the Q,
> in series, the higher the resistance the lower the Q
>
> So all is as expected!

Thanks for the good word. Hope you have good luck on your exam(s). Remember,
its a hobby too, so have fun!

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

374. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: Greg Werstiuk <greg_werstiuk@email.msn.com>
Message-ID: <dcN+OM40eSuplMvuQnFfPCwyduer@4ax.com>
Source record: 64180
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Jim -

TO-92 (plastic) 2N2222 (mostly sold as PN2222) are dirt cheap.

TO-18 (metal lcan) 2N2222 are far more expensive than $.025 each.
Been a while since I've priced them, but as I recall, in high volume,
they run around $.18 each.

On Mon, 10 Jan 2000 20:30:55 -0800, Jim Weir <jim@rst-engr.com> wrote:

>Bear <nospam@nospam.org>
>shared these priceless pearls of wisdom:
>
>-> For Sale: #1,000 2N2222 transistors. NOS, Motorola, Metal case. Price
>->= $35 plus UPS. USA only
>
>Why would I do that when they are $25/K from most every supplier in town?
>
>Jim
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

375. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <387EBA59.2D00@pop.removethistomailme.net>
Source record: 64181

John Burch wrote:
>
> I got "volunteered" for a (hobby) project that is
> going to require small quantities (2-10) of small
> value (5 pf to 25 pf) disc caps.
>
> A short visit to www [capacitor] lead me to a few
> sites where box car loads of capacitors are
> available, but my needs are much more modest
> than what the bulk suppliers are set up to handle.
>
> Can someone recommend a small quantity cap
> supplier?
>
> Thanks for your time
> John B
> occupant@dtgnet.com

For a couple of years now, Radio Shack has sold a bubble pack of several dozen very small disc ceramic capacitors, with values ranging from 2 to 33 pF, for $1.98 or so. This is one of the greatest RF bargains of the century in my opinion, and definitely qualifies as one of those rare instances where Radio Shack Did Something Right(tm).

I make it a habit to buy every package of those capacitors in sock every time I'm in a Radio Shack store, just out of fear they'll come to their senses and quit selling them. :-)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

376. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <85nqk2bhp1@nntp8.atl.mindspring.net>
Source record: 64182
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

In article <387E01ED.6301983F@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
>Yes, I was going to make a comment that the "cheap foreign crap" should
>not be confused with the "very high quality foreign parts" that I more
>commonly deal with. Don't look too closely: the Motorola parts may
>well have been made in Taiwan or some other country. The Burr-Brown
>OPA2134s in my hand were made in Taiwan. Same with the Texas
>Instruments TLC555s. I recall having to wait a week for samples of the
>National LM6172 (IIRC) because they had to be shipped from overseas. I
>wonder if the AKM5352s I have here were made in Japan, Korea, Taiwan, or
>maybe even the US. It's a global economy, and those unwilling to
>acknowledge it are the poorer for it, IMO.

It's very common to have the wafer fab in the US, but have the packaging
and testing overseas. And if slicing&diceing, bonding, molding and testing
adds more to the value than the cost of the original die, they have to
stick the other country as the country of origin.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

377. Re: Wireless FM Tx module for 1200 Baud.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <85j81qufa1@nnrp1.deja.com>
Source record: 64241

In article <JJ6f4.9360$T2.8608646@firenze.visi.net>,
"Moses Clark" <itek@sybercom.net> wrote:
> Greetings,
>
> (Do I really need a radio modem ??)
>
> First of all I have to say I don't know much about RF but, learning...
>
> I am trying to put a little telemetry applications together.
>
> The data is generated at 1200 baud in a TTL level.
>
> I am wondering if I can put this data through the microphone lead on
one of
> those miniature FM transmitter you can find in many different kit
shops.
>
> I am going to receive the data using matching speaker jack of the
receiver
> and connect to a PC serial port.
>
> The distance I am trying to work with is one(1) to Five(5) feet and
again
> the speed is 1200 Baud TTL serial signal.
>
> Thank you very much for your help.
>
> Brian
>
>
See Lemos Int. at www.lemosint.com They got what you want.
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

378. Looking for relay for t/r switch 144-432

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: timp@kf4fco.com
Message-ID: <bq5q7s893rbt59vmtfs7f0r2vlk2qs79c7@4ax.com>
Source record: 64242

I'm building a mast mounted preamp and looking for a t/r relay that
would handel 200 to 300 watts thanks tim

379. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387d20c6.184667979@news.online.no>
Source record: 64243
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Wed, 12 Jan 2000 13:45:20 -0800, Bear <nospam@nospam.org> wrote:

>x-no-archive: yes

>J M Noeding wrote:
>>
>> On Wed, 12 Jan 2000 10:53:51 -0800, Bear <nospam@nospam.org> wrote:
>>
>> >These were high quality USA manufactured transistors by Motorola, not
>> >the cheap foreign crap that is currently on the market.

>
> I prefer to purchase goods that are made in a civilized democratic county
>
>>Perhaps you suffers from the "not-invented-here-syndrome"?
>

we used to buy "cheap foreign crap" from Polypak some years ago,
believe it was made in America, later we got low-priced but high
quality European semiconductors

Jan-Martin LA8AK

380. Who owns the amp page at ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <85nl58$4rk$1@nnrp1.deja.com>
Source record: 64094

... 207.108.137.61/ ?
I have a few amp pix I'd like to show off
(if I can find them and the scanner works).

Please post the owner's email address to the forum -- or, Mr. Owner,
you post and say whether you're willing to take new photos.

Thanks in advance

Jim N6OTQ

Sent via Deja.com http://www.deja.com/
Before you buy.

381. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <d5mu7s0ekpor7l5kk42bsdfojinjaq3os5@4ax.com>
Source record: 64095
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Greg Werstiuk <greg_werstiuk@email.msn.com>
shared these priceless pearls of wisdom:

->Jim -
->
->TO-92 (plastic) 2N2222 (mostly sold as PN2222) are dirt cheap.
->
->TO-18 (metal lcan) 2N2222 are far more expensive than $.025 each.
->Been a while since I've priced them, but as I recall, in high volume,
->they run around $.18 each.

Try Taitron in Santa Clarita CA and see if they are still 18c each.
www.taitron.com if I'm not mistaken.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

382. Mitrek"Motorola?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Super Sport <rerickso@eidnet.org>
Message-ID: <hwKf4.18379$fy1.1266@tundra.ops.attcanada.net>
Source record: 64096

Hello out there , can anyone tell me what the amp requirements is
on a motorola Mitrek 2 meter xtal controlled , Model # is CT43JJA 1900 A.
cekenned@eidnet.org Cecil VE6KCG

383. WTD: circuit: bench PS 2-25v, 2amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <387e301a.1230084@news.u-net.com>
Source record: 64097
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,sci.electronics.basics

anyone have a good, relatively simple circuit for a quality bench
power supply with adjustable voltage and current...about 2-30V and up
to 2 or 3 amps??

I have the ARRL 1997 handbook circuit but it seems to me to be more
complicated than is really necessary. I'm thinking of something built
around the LM723....

Larry MW0AWC

384. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387F809F.51D03EBC@agilent.com>
Source record: 64098
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Jim Weir wrote:

> Try Taitron in Santa Clarita CA and see if they are still 18c each.
> www.taitron.com if I'm not mistaken.

Far be it from me to say you're mistaken (:-) but one might try
http://www.taitron.net/

Strange web page. There are "Order Catalogs" and "Online Catalog"
buttons but they apparently don't do anything. At least there are 1-800
phone numbers.

Cheers,
Tom

385. Re: WTD: circuit: bench PS 2-25v, 2amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <85o5jn$i2i$1@nnrp1.deja.com>
Source record: 64099
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,sci.electronics.basics

In article <387e301a.1230084@news.u-net.com>,
gagnon@gagnon.fakeu-net.com (Larry Gagnon) wrote:
> anyone have a good, relatively simple circuit for a quality bench
> power supply with adjustable voltage and current...about 2-30V and up
> to 2 or 3 amps??

If you're not big into protection circuitry and having real current
control with a pot is not an actual need, an LM350K will do the job.
So will an LM317 driving the base of a 2N3055. You can current-limit
with an emitter resistor as well as with a suitably small transformer.

I've had a very crude adjustable supply in use for some 15 years,
based on an LM317T. It gives me about an amp from 2 to 37 volts,
and appears to be indestructible. Someday I may have to change
the filter cap for something manufactured in this century...

Somebody posted on rec.radio.amateur.homebrew a few days ago about a
circuit using two LM317s, one controlling voltage and one controlling
current. He cited National as the source, so the circuit may be in
the National Linear databook or on National's web page.

Jim N6OTQ

Sent via Deja.com http://www.deja.com/
Before you buy.

386. Re: WTD: circuit: bench PS 2-25v, 2amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <85o64qigr1@nnrp1.deja.com>
Source record: 64100
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,sci.electronics.basics

In article <85o5jn$i2i$1@nnrp1.deja.com>,
jstrohm@texas.net <jstrohm@texas.net> wrote:

> Somebody posted on rec.radio.amateur.homebrew a few days ago about a
> circuit using two LM317s, one controlling voltage and one controlling
> current. He cited National as the source, so the circuit may be in
> the National Linear databook or on National's web page.

Try these:
http://www.national.com/an/AN/AN-178.pdf
http://www.national.com/ms/LB/LB-35.pdf

Sent via Deja.com http://www.deja.com/
Before you buy.

387. FS: Tubes, Books & misc. stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <85nmm1$cjjm$1@newssvr03-int.news.prodigy.com>
Source record: 64101
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

e-mail m.pasternack@prodigy.net to receive 10 page list. Murray, W6KRC

388. Re: "Potted"/blown(?) pwr transformer -- no good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <387F94B5.2598ED7F@corecomm.net>
Source record: 64102

JGinNY wrote:
> Got a 110V-to-600v transformer in a small 60's vintage transceiver; may
> be blown. There was a short in the pwr supply at one point, big sparks
> and lots of smoke!
>
> Black deposit on cloth covered leads, just where they exit the metal
> tfmr housing.

Probably tar, put there when the transformer was made. I remember being put off by seeing that on just about every new transformer of reasonable capacity I saw during the 60's and 70's.

> Still appears to yield proper voltage on secondary, and rig receives
> fine, but loud raspy hum in audio on transmit.
> (btw, All new replacement filter caps in pwr supply circuit.)

1. "New" doesn't necessarily mean "good". Try parallelling each with a tubular (preferably powering down while attaching and detaching it, unless you like sparks).

2. If you wired the new caps in parallel with existing cans, parts of the cans may have high power factor rather than just being low in capacitance; this can cause problems too. If that's what you did, try getting each section of the can out of the circuit for a test period to see if that helps any.

> Is it likely the transformer is damaged, and could it be in part causing
> the 60 cycle crud?

I doubt it very much unless the thing stinks to high heaven or gets really, really hot in a short time. Those older transformers were built to stop speeding trucks and power entire cities. :-)

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

389. [HRU2000] Ham Radio University 2000

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: HRU2000 <info@gsbarc.org>
Message-ID: <%FMf4.3149$eZ3.5929486@news.optonline.net>
Source record: 64103
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap

Ham Radio University - HRU2000
Babylon Town Hall Annex
Phelps Lane & Miller Ave
North Babylon, NY
Sunday January 23, 2000
9:00 AM - 2:00 PM

This is a special day of education for amateur radio. Many ham radio Clubs and organizations from the New York City-Long Island Section will have information booths. This is your opportunity to meet the local clubs and organizations and learn their activities, meetings and membership. There will be a free tune-up clinic, DXCC & WAS card checking, eye-ball qso room, a full VE session along fifteen technical forums with guest speakers from the NLI section.

Donation: $2.00. Spouses and children under 12 will be admitted free.

For more information via Internet: http://arrlhudson.org/nli/hru2000.htm

Contact: Phil Lewis N2MUN (631) 226-0698

FORUM SCHEDULE
10:00 - 10:45 AM
Session 1A -Amateur License Restructuring - George Tranos N2GA
1B -Packet- John Papson WB2CIK & Bob Anderson K2BJG
1C -RFI & SWR - Sid Wolin K2LJH
10:50 - 11:35 AM
Session 2A -DX - Marty Miller NN2C
2B -APRS - John Blowsky KB2SCS
2C -YL Forum - Diane Ortiz K2DO
11:40 AM - 12:25 PM
Session 3A -Introduction to Contesting - Mel Granick KS2G
3B -Amateur Radio Satellites - Ken Ernades N2WWD & Bill Scheibel N2NFI
3C -QRP - Norman Wesler K2YEW
12:30 - 1:15 PM
Session 4A - Antenna(s) - Mike Kozma WY2U
4B - A.R.E.S. - Tom Carrubba KA2D
4C - Kit Building - Neil Heft KC2KY
1:20 - 2:05 PM
Session 5A - Tower Regulations - Mike Anderson N2TX
5B - QCWA - Herman Milatz W2TLC
5C - Purchasing Amateur Equipment - Phil Lewis N2MUN
******* VE 2:15 PM room 1A

Amateur Radio Organizations Supporting HRU2000
American Radio Relay League (ARRL)
Great South Bay Amateur Radio Club (GSBARC)
Grumman Amateur Radio Club (GARC)
Hall of Science Amateur Radio Club (HOSARC)
Islip A.R.E.S. (ISLIPARES)
Kings County Radio Club (KCRC)
Larkfield Amateur Radio Club (LARC)
Long Island DX Association (LIDXA)
Long Island Mobile Amateur Radio Club (LIMARC)
Mid-Island Amateur Radio Club (MIARC)
Nassau Amateur Radio Club (NARC)
Quarter Century Wireless Association (QCWA)
Radio Central Amateur Radio Club (RCARC)
South Shore Amateur Radio Club (SSARC)
Suffolk County Radio Club (SCRC)
Town of Babylon Amateur Radio Emergency Services (TOBARES)
Wantagh Amateur Radio Club (WARC)

Special Thank You
Township of Babylon for providing the location
Walter Wenzel KA2RGI for providing the HRU2000 ID badges
HRU2000 Committee for their dedication and commitment that made this event happen.

HRU2000 Committee
Phil Lewis N2MUN, Chairperson
George Tranos N2GA
Diane Ortiz K2DO
Marty Miller NN2C
Walter Wenzel KA2RGI
Tom Carrubba KA2D

Directions to HRU2000
Location: Babylon Town Hall Annex
Phelps Lane/Miller Ave
North Babylon, NY
Talk-in W2GSB repeater 146.685 -600 136.5 PL

Southern State Parkway

from the WEST: SS PKWY EAST to exit 37 South (Belmont Ave) continue straight across Belmont Ave unto Sylvan Road. DO NOT TURN RIGHT OR LEFT. Continue along Sylvan Road to the first STOP SIGN. Turn right onto Miller Ave. Past the stop sign turn left into the Town Hall Annex parking lot.

From the EAST: SS PKWY WEST to exit 39 South NY 231 Babylon. At the first traffic light, turn right onto Sylvan Rd. At the stop sign turn left onto Miller Ave. Past the stop sign turn left into the Town Hall Annex parking lot.

Sunrise Highway (NY27)

from the EAST or WEST: SUNRISE HWY (NY27) to exit 40 (231 Babylon-
Huntington). Stay to the right on the service road to 231 NORTH
(Huntington).
At the fourth light counting the blinking light, turn left onto Sylvan Rd.
At the stop sign turn left onto Miller Ave. Past the stop sign turn left
into
the Town Hall Annex parking lot.

Long Island Expressway (NY495) non commercial vehicles from the WEST -
NY495 EAST to 44S (NY135) South to Southern State Parkway East.

from the EAST - NY495 WEST to exit 53 (Sagitkos Parkway). Service Road to
SA BAYSHORE -SOUTH to Southern State Parkway - WEST (NEW YORK).
FOLLOW SS PKWY Directions......

Long Island Expressway (NY495) Commercial Vehicles
from EAST or WEST - NY495 to exit 51 south (231 - BABYLON). Continue on
231
south. At the first traffic light after passing Southern State Parkway turn
right on Slyvan Road. At the stop sign turn left onto Miller Ave. Past the
stop sign turn left into the Town Hall Annex parking lot.

73 - HRU2000 Staff

390. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387f4a1f.326346221@news.online.no>
Source record: 64104
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Fri, 14 Jan 2000 10:51:16 GMT, rhawk@megabits.net (Robert Hawk)
wrote:

>
>If you are talking about "polypacks in Massachusetts, they were always
>a "floor sweepings" type HOBBY business.. No Production manager in his
>right mind would by from them..
>
>Just my opinion
>
you may not be aware that you posted to r.r.a.h and r.r.s, or do you
think it is sci.electronics.design?

Jan-Martin LA8AK

391. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <387f4b75.326687804@news.online.no>
Source record: 64105
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Fri, 14 Jan 2000 11:03:00 GMT, rhawk@megabits.net (Robert Hawk)
wrote:

>No. We are use to inventing all types of new stuff, Only to have the
>design stolen and done "KNOCK OFF" style in some third world toilet
>by slave labor
>
>Just my opinion..
>
and in your opinion the third world toilet is elsewehere -
outside America?

392. Re: WTD: circuit: bench PS 2-25v, 2amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <387FA8B8.B1460DEB@agilent.com>
Source record: 64106
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,sci.electronics.basics

See the LM317 data sheet, in the "typical applications" section.
There's one labeled, "5A Constant Voltage/Constant Current Regulator."
The diagram shows output 1.2V--30V. Lots of other ideas in there, too.

Cheers,
Tom

Larry Gagnon wrote:
>
> anyone have a good, relatively simple circuit for a quality bench
> power supply with adjustable voltage and current...about 2-30V and up
> to 2 or 3 amps??
>
> I have the ARRL 1997 handbook circuit but it seems to me to be more
> complicated than is really necessary. I'm thinking of something built
> around the LM723....
>
> Larry MW0AWC

393. Ebay item. Tube related

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: yodabean1@yahoo.com.nospamplease
Message-ID: <qdrv7s0jg6f9rf3b22gchpouf60s8ongqd@4ax.com>
Source record: 64107
Cross-posted to: rec.radio.amateur,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.shortwave,rec.radio.swap

Hi;

Repair shops / tube audio gurus / radio buffs take a look!

One lot of tube shields for the 9 pin miniature tubes (12ax7,
12au7...etc) these are the twist-lock spring-loaded type used in
radio and tube audio gear.

There are over 300 in the lot and the current bid is $15.50. I have
seen these go for over a buck a piece at hamfests and over $3.00 each
on the net.

Stock up now!

Don't miss out on this one!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=236415863

394. Re: Looking for relay for t/r switch 144-432

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: timp@kf4fco.com
Message-ID: <9oss7ssfjog0163ll2rhq1unu585telbsi@4ax.com>
Source record: 64183

On Thu, 13 Jan 2000 22:35:18 GMT, LA8AK@online.no (J M Noeding) wrote:

Thanks just what the doctor ordered. I found that I need a dpdt type
to do what I need tim

>On Thu, 13 Jan 2000 00:13:53 GMT, timp@kf4fco.com wrote:
>
>>I'm building a mast mounted preamp and looking for a t/r relay that
>>would handel 200 to 300 watts thanks tim
>
>a very common quarterwave line circuit using a Unitrode UM9401 with
>bias during transmit will work (two smaller diodes in anti-paralell
>on RX side,2* BA282 or similar will work), it does not hurt to feed
>the current through the diodes on TX port ant RX port, but if you wish
>to use higher power, say 5kW, you may still use the Unitrode diode,
>see SM5BSZ's site. You may search for SM5BSZ or G3SEK, it is a path
>from G3SEK's site
>
>it is principally possible to use a quarterwave line circuit on 2m for
>70cm, the coax cable length are not at all critical, but must be n'th
>odd order quarterwaves on 70cm, not too close to even order.
>
>Have seen some very accurate calculations for 2m lines (switches up to
>few hundred watts), they are probably described by somebody who
>haven't tried more than the one described, and have probably not
>measured any losses. I have made and used almost a douzen two metre
>switches and a few for 70cm packet radio.
>
>73 Jan-martin LA8AK
>

395. I.F. can cores as ferrite bead substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <6uvf4.2701$0l4.58507@tw12.nn.bcandid.com>
Source record: 64184

O.K., there is almost no way to know the 'mix' or 'perm' or
anything else. But I have created baluns, rf chokes, and all
kinds of 'as needed' broadband rf transformers. I have been able
to easily get 14 turns of kynar coated 'wire wrap' A.W.G. #30
through the 'hexagonal hole' in these little devils. Just find
some junk 455khz i.f.cans (the old kind) and remove the tuning slug.
I have had nothing but success so far.

73 Gummi

396. Re: Longevity of P.S. transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: "Barry L. Ornitz" <ornitz@NOSPAM.tricon.net>
Message-ID: <Ynxf4.3111$0l4.77678@tw12.nn.bcandid.com>
Source record: 64185
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Steve Huss wrote in message ...
+AD4-I've got a couple boatanchors that I plan on keeping for a long time
(Drake
+AD4-and Hammarlund). Every once and awhile I see someone advertising for a
+AD4-replacement P.S. transformer. Is this the result of one going out in
normal
+AD4-use or is it due to big time failure of the filter/bypass caps? Can
+AD4-varnished wire wear thin after 50 plus years of service?

If you want to keep the old transformer running, keep it cool and keep it dry.

A rule of thumb in chemistry is that reaction rate doubles for every 10 degrees C rise in temperature. Experimental work in the 1930's demonstrated that transformer insulation and such double their degradation rate for every 8 C temperature rise. It is good practice to keep the transformer temperature below 60 C (140 F). This is approximately the highest temperature where you can touch and hold your fingers there.

This is why in old tube gear, I always use solid-state rectifiers. The reduction of typically 10 to 15 watts from the filament winding allows the transformer to run a little cooler helping to compensate for its age. Most old radio designers knew little about heat transfer and many old radios run absolutely far too hot. Note that when silicon diode are used rather than a tube, you may have to add a series resistor to keep the voltage at the old level. The heat dissipated by this resistor is exactly the same as that produced by the plate dissipation of the rectifier tube. But you often have some control over where this resistor is located giving you better heat transfer. A small fan will work wonders in keeping old gear cool.

Proper fusing generally takes care of capacitor failure as a transformer can usually take a very high overload for a very short period of time (until the fuse blows).

73, Barry L. Ornitz WA4VZQ
ornitzNO+AEA-SPAMtricon.net

397. Re: IC-751

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Tom <radioguy@mr.net>
Message-ID: <Joyf4.40$mV2.5957@news7.onvoy.net>
Source record: 64186
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Have you tried Icom ??

Tom

Bill and Tracy <tmbc@nf.sympatico.ca> wrote in message
news:9otf4.57398$Ke.54194@news21.bellglobal.com...
> Does anyone know where I could buy or get a copy of the manual for the
Icom
> IC-751? Thanks.
>
>

398. Re: Source for small value disc ceramic caps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Tom Woodrow <tomwoodrow@internetconnect.net>
Message-ID: <387EBDFF.B034699D@internetconnect.net>
Source record: 64187

www.digikey.com

John Burch wrote:
>
> I got "volunteered" for a (hobby) project that is
> going to require small quantities (2-10) of small
> value (5 pf to 25 pf) disc caps.
>
> A short visit to www [capacitor] lead me to a few
> sites where box car loads of capacitors are
> available, but my needs are much more modest
> than what the bulk suppliers are set up to handle.
>
> Can someone recommend a small quantity cap
> supplier?
>
> Thanks for your time
> John B
> occupant@dtgnet.com

399. Radio Shack equip. for UK?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: "David Waters [UK]" <davidwaters@email.com>
Message-ID: <85mkj2ckm1@nclient3-gui.server.dtn.ntl.com>
Source record: 64188
Cross-posted to: alabama.birmingham.radio.amateur,alt.radio.family,aus.radio.amateur.misc,fj.rec.ham,in.ham-radio,rec.radio.amateur.homebrew,rec.radio.shortwave,sbay.hams,tamu.kanm.radio

I need to purchase some equipment only available from Radio Shack in the States, please help on supplier / web site who will ship to U.K.
Regards. - Dave

400. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: rhawk@megabits.net
Message-ID: <387efc83.4277212@news.megabits.net>
Source record: 64189
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Wed, 12 Jan 2000 17:58:10 -0500, "abcd1234"
<abcd1234@ix.netcom.com> wrote:

>
>
>where can I buy 1 K 2n2222 metal can to18 trannies for
>$25 ? Certainly not mouser !
>
Depends if they have "swept the floor" lately!!

Bob
>
>73's
>
>
>
>
>Don W6JL wrote in message <387B85FD.44D@ixpres.com>...
>>Jim Weir wrote:
>>>
>>> Bear <nospam@nospam.org>
>>> shared these priceless pearls of wisdom:
>>>
>>> -> For Sale: #1,000 2N2222 transistors. NOS, Motorola, Metal case.
>Price
>>> ->= $35 plus UPS. USA only
>>>
>>> Why would I do that when they are $25/K from most every supplier in town?
>>>
>>> Jim
>>> Jim Weir, VP Eng. RST Eng. WX6RST
>>> A&P, CFI, and other good alphabet soup
>>
>>
>>Jim,
>>
>> Shhhh.. ur not 'sposed to know that, don't y'know... HI
>>
>> 73,
>> Don, W6JL
>>
>>--
>>□□□□

>
>

401. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: rhawk@megabits.net
Message-ID: <387efe9a.4812008@news.megabits.net>
Source record: 64190
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Thu, 13 Jan 2000 00:49:13 GMT, LA8AK@online.no (J M Noeding) wrote:

>we used to buy "cheap foreign crap" from Polypak some years ago,
>believe it was made in America, later we got low-priced but high
>quality European semiconductors
>
>Jan-Martin LA8AK

If you are talking about "polypacks in Massachusetts, they were always
a "floor sweepings" type HOBBY business.. No Production manager in his

right mind would by from them..

Just my opinion

Bob

402. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: rhawk@megabits.net
Message-ID: <387efd30.4449751@news.megabits.net>
Source record: 64191
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

On Wed, 12 Jan 2000 21:10:09 GMT, LA8AK@online.no (J M Noeding) wrote:

>On Wed, 12 Jan 2000 10:53:51 -0800, Bear <nospam@nospam.org> wrote:
>
>
>>These were high quality USA manufactured transistors by Motorola, not
>>the cheap foreign crap that is currently on the market.
>
>By the way, what makes you believe they are better when made in God's
>own country? Perhaps you suffers from
>the "not-invented-here-syndrome"?
>
No. We are use to inventing all types of new stuff, Only to have the
design stolen and done "KNOCK OFF" style in some third world toilet
by slave labor

Just my opinion..

Bob

403. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-DB31E0.07193014012000@news.erols.com>
Source record: 64192
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

No one has mentioned variation on the final plate current due to poor B+
regulation. Many plate modulated transmitters use common B+ for the RF
final and modulators. Some older ham transmitters had as little as 4 uF
of filter capacity. The dynamic regulation of these supplies was quite
poor.

In article <BDd9ONfdKiJxZy13rOzIHAnaJO0w@4ax.com>, Gary Coffman
<ke4zv@bellsouth.net> wrote:

> On Wed, 12 Jan 2000 13:03:15 -0800, Tom Bruhns <tom_bruhns@agilent.com>
> wrote:
> >You're right that with linear modulation with zero DC content, the
> >current from the plate supply of the plate modulated stage will not
> >change.
>
> But the reason the meter *does* kick is that the voice modulating signal
> isn't either a 50% duty cycle square wave or a symmetric sinewave.
> Part of this is due to the nature of the vocal waveform itself. It is
> complex,
> often asymmetric, and most definitely not a pure sinewave. Another part
> of this may be due to distortion products introduced in the speech
> amplifiers, or in the modulation process itself, ie you could be
> flattopping.
>
> It isn't unusual to see *some* variation in the plate current under
> modulation
> simply due to the characteristics of the vocal waveform. But if you're
> seeing
> a lot, you've probably got problems. An exception to this would be a
> transmitter
> using controlled carrier modulation. In that case, you do see plate
> current
> variations with modulation *by design* (carrier amplitude is varied so
> that
> it is just sufficient to prevent overmodulation at any modulating level).
> This
> is perfectly normal behavior for this type of transmitter. A few amateur
> rigs do AM this way.
>
> Gary
> Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
> 534 Shannon Way | We break it |
> Lawrenceville, GA | Guaranteed |

404. Re: I.F. can cores as ferrite bead substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-14 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000114094624.08897.00000655@ng-fi1.aol.com>
Source record: 64193

>
> O.K., there is almost no way to know the 'mix' or 'perm' or
>anything else. But I have created baluns, rf chokes, and all
>kinds of 'as needed' broadband rf transformers. I have been able
>to easily get 14 turns of kynar coated 'wire wrap' A.W.G. #30
>through the 'hexagonal hole' in these little devils. Just find
>some junk 455khz i.f.cans (the old kind) and remove the tuning slug.
> I have had nothing but success so far.

Sure this works but ... those old 455 IF cans are probably a lot more valuable now than a few ferrite cores. I'd trade brand new ferrite cores for old IF transformers most days of the week. The balun cores (two holes) are less than a half a buck.

Doug Moore

405. vhf/uhf

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Tusk <tusky1@dingoblue.net.au>
Message-ID: <85oad7$e00$1@news1.mpx.com.au>
Source record: 64108

Hello fellas,anyone with any dual band vhf/uhf mobile antenna plans or locations of info
rgds

406. Re: 4PR400A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Jim Bennett <jimbennett@home.com>
Message-ID: <moPf4.4910$G42.121220@news.rdc1.tn.home.com>
Source record: 64109

Yes a 4PR400 is, for all practical purpose, a direct replacement for a
4-400.

jim

Randall D. DuCharme <randyd@NO-SPAMtcainternet.com> wrote in message
news:387C0269.EBD79547@NO-SPAMtcainternet.com...
> Greetings,
>
> How does a pulse rated tube compare to a non-pulse rated unit? Output?
> Capacitance? Are they 'plug&play' compatable??? ;-) <bad joke... I
> know>
>
>
> Thanks a bunch!
>
>
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email
> address.
> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a result of posting to these newsgroups, I find no other
> easy
> solution.
> --
> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>
> Unsolicited commercial email (SPAM) received at this email address
> will not be tolerated. All spam is subject to a $200 per incident
> processing fee and possible legal action pursuant to federal
> regulations.

407. FS: Collins RF Wattmeter (revisited)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: John Mackesy <mack@melbpc.org.au>
Message-ID: <85olt3$28q$1@possum.melbpc.org.au>
Source record: 64110
Cross-posted to: aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

This is a device for measuring forward or reflected power, also known as a directional coupler.

Ranges:

Forward - 200W & 2 Kw
Reflected - 200W & 2 Kw

Frequency: 2 Mhz to at least 30 Mhz

There are 3 parts: the power sensor, which is a metal block 6 cm x 6 cm x 4.5 cm, the meter (7.5 cm square) and the range switch. The power sensor has 2 N connectors, power in and antenna and 4 feed-through connections to the range switch.

The meter scale is non linear. Center scale low range is 80W, high range 500W.

This is the same assembly as used in the Collins KWM2 series of transceivers, and was removed from a piece of test equipment.

In excellent condition, completely wired, with wiring diagram, and ready to mount into your equipment or a small box.

Shipping weight approx 500 gm.

Best offer takes it.

John Mackesy VK3XAO

PS - it's NOT a dummy load!

408. Re: I.F. can cores as ferrite bead substitute

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <zpSf4.10412$0l4.197763@tw12.nn.bcandid.com>
Source record: 64111

In article <20000114094624.08897.00000655@ng-fi1.aol.com>,
troglodite@aol.com says...
>
>>
Just find some junk 455khz i.f.cans (the old kind) and remove the tuning
slug.
I have had nothing but success so far.

>Sure this works but ... those old 455 IF cans are probably a lot more
valuable
>now than a few ferrite cores. I'd trade brand new ferrite cores for old
IF
>transformers most days of the week. The balun cores (two holes) are
less than a
>half a buck.
>
>Doug Moore
>
I must agree with you on that issue of not destroying older
valuable parts stock. In thinking back, most of my slugs (and
I have a large tray of them) came from early to mid seventies
tv receivers that were tube type. I yanked the slugs from the
i.f. strips before i junked the chassis. This would also explain
why the slugs work so well for me, as almost all of my experimenting
is limited to 14-30mhz, and the slugs would have been designed
for 40-45mhz operation. Just wanted to clear up a messy post.
73

409. Re: 6080 Tubes, $1.50 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <85pmds$no1$1@news1.exit109.com>
Source record: 64112
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

hi ng,

For the Triode Heads and Audio Philez,
this 6080 is MIL 6AS7 tube and should
work very well in triode amps.

MURRAY PASTERNACK wrote in message
<85l2fi$2n1u$1@newssvr04-int.news.prodigy.com>...
>
>I have 62 used type 6080 tubes that were pulled from government surplus HP
>equipment. these are untested & are sold as is, for $1.50 each. I have a 10
>page list of other tubes I have accumulated over the last 46 years, e-mail
>me at m.pasternack@prodigy.net for a copy. Murray, W6KRC
>
>

410. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38805B3F.458B4B97@mindspring.com>
Source record: 64113

And very unlikely, given the new TOC introduced in the 1/2000 issue of QST. As far as I can tell, the emphasis on technical matters is being shifted towards tubes and QRP. That is fine by me, but it is definitely not in the direction of development and innovation.

Will
KD7BFX

Roy Lewallen wrote:

In fact, though, only a tiny fraction of amateurs are
> really interested in technical material of the level found in QEX or
> Communications Quarterly. So putting this material into QST in place of
> content which is of interest to a much larger fraction of the readers
> would be a foolish thing for the ARRL to do, much as you and I might
> like it.

411. FT-243 crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38805C02.EC0EB4D7@mindspring.com>
Source record: 64114

I saw in a magazine sometime over the past three months that CW Crystals (sic) still sells new manufacture HF ham band crystals in a FT-243 case. I can't find CW Crystals, even an address, anywhere on the web. Where are they, do they actually sell said xtals, and where else should I be looking for them?

WIll
KD7BFX

412. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Valter Hilden <vhilden@infolink.com.br>
Message-ID: <38806402.A30756E2@infolink.com.br>
Source record: 64115
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Bear wrote:
> ...
> I have seen WAY too many D.O.A devises that were made by slave labor in
> some Third World Hell-hole that cant even be located on a current map. I
> prefer to purchase goods that are made in a civilized democratic county
> where the workers are paid a fair living wage and work under clean and
> safe conditions. Apparently, this is a concept beyond you obviously
> limited comprehension.
>

Excuse this Third World slave's "limited comprehension" - I would like
to buy a made-in-USA dynamic RAM, but it seems they are all made in
Japan or Korea. And I mean the chip itself, including the R&D, not just
the packaging. When they got over 64 kbits the USA got left behind and
stopped making them.

> >Perhaps you suffers from
> > the "not-invented-here-syndrome"?
>
> Perhaps you suffer "S" from "Small Weenie Syndrome"? It looks like you
> did not excel in English grammar, either.....Or do you speak "Ebonics"?
> <LOL>
>
> I never dreamed when I posted this add that it would afford so many
> people on this news group an opportunity to display their ignorance for
> the entire world to see.

Well, did you check the spelling on your own "devises" above? If we
assume you have a perfect grammar and spelling, according to my
"Webster's Unabridged", you meant either:
1) a gift of real property by will; or
2) a will, or clause in a will, granting such a gift.

413. Re: FT-243 crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: "George Beloin", WA1PIX <poorgeorgeNOpoSPAM@juno.com.invalid>
Message-ID: <19843fda.77560cd3@usw-ex0106-048.remarq.com>
Source record: 64116

CW Crystals is listed on the ARRL Tis Find database as out of business.
Go the the ARRL site at: www.arrl.org and click on the search button,
search for "tis find" and put in "crystal" in the find box to get a
list of crystal manufacturers from their site.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

414. Re: Cryatal sources???? Help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: "George Beloin", WA1PIX <poorgeorgeNOpoSPAM@juno.com.invalid>
Message-ID: <10405393.7846c7f4@usw-ex0106-048.remarq.com>
Source record: 64117

Go the the ARRL site at: www.arrl.org and click on the search
button, search for "tis find" and put in "crystal" in the find box to
get a list of crystal manufacturers from their site. Yours, George
Beloin, WA1PIX

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

415. Interface David Clarks to transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: "Alan D. Wilcox" <awilcox@suscom.net>
Message-ID: <3880799B.A0D2DAC3@suscom.net>
Source record: 64118

Hello,

I'd like to use David Clark H10-20 (or the H10-60) headsets with
ham transceiver. They have electret microphone that needs a DC bias
voltage applied.

Anyone have a schematic of audio circuit of aviation transmitter? Or
some thoughts on what circuitry I might kludge together to build
an interface?

Many thanks,

Alan, W3DVX

416. Re: FS: Tubes, Books & misc.stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: pete <peteNOpeSPAM@adinet.com.uy.invalid>
Message-ID: <3413d240.4caad56b@usw-ex0110-073.remarq.com>
Source record: 64119
Cross-posted to: rec.radio.amateur.homebrew,rec.antiques.radio+phono,rec.radio.amateur.boatanchors

I need these books:
The linear amplifier plan book Vol 1 and 2
The black book of linear amplifiers.
Or related books.
Pete

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

417. FS: KLM 140w 2M amp - $100

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: sims@sauron.msfc.nasa.gov
Message-ID: <85qfn9jsq1@hammer.msfc.nasa.gov>
Source record: 64120

For sale: KLM 140W 2M amplfiier. 25W in gets you 150W out. $100 plus shipping.

Herb
KU0C
Decatur, AL
(256) 544-8581 (W)
(256) 351-6066 (H)

--

W. Herb Sims herb.sims@msfc.nasa.gov
NASA/MSFC/ED18 Voice (205) 544 8581
Huntsville, AL 35812 FAX (205) 544 8483
KU0C PP-ASEL-IA

If someone with multiple personalities threatens to kill himself,
is it considered a hostage situation?
---

418. Re: FT-243 crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: JDM <jdm@iland.net>
Message-ID: <3880D055.446CF3C8@iland.net>
Source record: 64121

Last I knew they were in Nevada,Missouri

419. WTB: Viking Valiant with SSB Adaptor.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: bill bryant <willbryant@msn.com>
Message-ID: <#OU8#v5X$GA.272@cpmsnbbsa04>
Source record: 64122

```
WTB: Viking Valiant with SSB Adaptor.
This for my personal station ... I am not a collector.
Bill
```

420. Re: mobile verticle ant question (opinions?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000115182511.13708B-100000@oso.slonet.org>
Source record: 64123

Seems like you missed it then and missed it now!

On Sun, 16 Jan 2000, gudmundur wrote:

> Have you seen the 'fad' of truckers tilting their 1/4 verticles
> forward at a 45 degree angle? As a broadcast engineer of over 13
> years experience I thought this was the dumbest thing I ever saw.
> Well, guess what? I drive truck now (and make far more money BTW)
> and I tried the 'tilt' thing. It actually works!! Why??? I am
> thinking that it gets the high impedance end of the ant away from
> the trailer. It should work far worse in this tilted mode, but it
> works no less than 1/2 'S' unit better in most cases, and seems to
> enhance my range by perhaps 1 mile minimum. So, what goes??
> 73 Gummi.
>
>
>

421. Re: "Potted"/blown(?) pwr transformer -- no good?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-15 00:00:00 UTC
From: Dick Grindley <Dick@langwang.demon.co.uk>
Message-ID: <TlAxIAA$8Eg4EwY3@langwang.demon.co.uk>
Source record: 64124

In article <387DF0D7.DF7560C1@twcny.rr.com>, JGinNY
<jgovost1@twcny.rr.com> writes
>Got a 110V-to-600v transformer in a small 60's vintage transceiver; may
>be blown. There was a short in the pwr supply at one point, big sparks
>and lots of smoke!
>
>Black deposit on cloth covered leads, just where they exit the metal
>tfmr housing.
>Still appears to yield proper voltage on secondary, and rig receives
>fine, but loud raspy hum in audio on transmit.
>(btw, All new replacement filter caps in pwr supply circuit.)
>
>Is it likely the transformer is damaged, and could it be in part causing
>the 60 cycle crud?
>
Suggest one way of checking the txfr would be to disconnect ALL
connections, use multimeter to identify windings (if they're not shown)
and then Megger between the windings (UK speak for checking insulation
resistance - my hand cranked Megger Insulation Tester shows no signs of
giving up the ghost so why should I join the 20th century ?). If
everything looks OK connect txfr to mains (still off load) & monitor
primary current, should be virtually 0 unless some of the turns have
gone s/c. If you've got shorted turns then, as well as drawing current
off load, the txfr will start to get warm and (might) make buzzing
sound, although this can be due to loose core laminations. Additional
fuzing in the primary might well be a prudent measure in case of a
really good 4th July type of s/c. If it was me I'd be looking for an
insulation resistance of a lot better than 0.5M; if the txfr is potted,
wax impregnated and/or sealed then there is not much you can do to fix a
s/c turn but if you're lucky & can take the txfr apart then rewinding is
a simple (but tedious) option. I'm probably teaching my granny to suck
eggs and far better ways for testing txfrs must have been invented since
I last showed Marconi/Edison how to use a multimeter but you never know
...... hope the info is of some use.
--
Dick on the LangWang
May the pharmacist preparing medication for Bill Gates' piles get chilli oil
and olive oil mixed up.

422. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <gjSXNJA2Lag4EweO@ifwtech.demon.co.uk>
Source record: 64044

wrote:
>On Tue, 11 Jan 2000 14:39:19 -0500, Brad Thompson
><brad.thompson@valley.net> wrote:
>[snip]
>>Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
>>construction magazine, catering to audio/radio/robotics/model aircraft/amateur
>>telephony
>>and tesla coils-- all at a level supported by whatever components you can still
>>purchase
>>off-the-rack at Radio Shack.
>>
>>Dark days are indeed upon us....
>
>Well, maybe not. The advent of personal web pages on the Internet has
>put a lot of construction articles within easy reach of the masses,
>and the subscription rate is just right.
>
>Maybe all we're losing is the paper and the advertising...
>
And the editing. Everybody's writing benefits from some critical review,
which you get from an editor when you're writing for a good magazine.
However, it's totally lacking from most articles published on the web.

It's also lacking from a lot of the 'advertorial' articles in the free
professional magazines.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

423. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <948037745.170814281@news.indigo.ie>
Source record: 64045

```
>>and i would like to make a 1 kw power amplifier
>>for decametric's frequencies
>>but i havn't any schematic or pcb ...
>
>I'm an old ham, but I have no idea what a "decametric frequency"
>is... please excuse my ignorance.
>
>73,
>monty N5FC

Ten Metres or more likely ten plus one.

Ed. EI9GQ.

--

Remove 'X' to reply by e-mail.
```

424. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <3881EB1E.A2AADD04@mwci.net>
Source record: 64046

Ian White, G3SEK wrote:

> And the editing. Everybody's writing benefits from some critical review,
> which you get from an editor when you're writing for a good magazine.
> However, it's totally lacking from most articles published on the web.

In the discussion groups, articles usually tend to be ad hoc and extemporaneous. In a published article the author has wrestled with his material at much greater length, perhaps months or even years. On the internet we all need to be tolerant of quick responses. One thing I like about discussion threads is that insight and knowledge improve, errors get fixed, as the threads proceed.

Bill W0IYH

425. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <3881F11A.DD3A1BF8@valley.net>
Source record: 64047

"Ian White, G3SEK" wrote:<snip>

> And the editing. Everybody's writing benefits from some critical review,
> which you get from an editor when you're writing for a good magazine.
> However, it's totally lacking from most articles published on the web.
>
> It's also lacking from a lot of the 'advertorial' articles in the free
> professional magazines.
>

AMEN! Shout it, brother!!

Having edited my share of articles for a controlled-circulation trade mag, I can testify that
the incoming-manuscript slush pile contains several advertorials for each solid technical
manuscript. We generally don't get too alarmed by poor grammar and spelling-- that's what editors fix-- but puff pieces for someone's components or instruments raise a red
flag.

73,
Brad AA1IP

426. FS: Amorphous solar panels

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Steven Shepard <sbtdesigns@stic.net>
Message-ID: <3882004A.9BBFD557@stic.net>
Source record: 64048
Body handling: Binary attachment payload not displayed: vcard.vcf

We now have a source for raw amorphous solar
panel material. This is raw stock rated
various voltages and various current levels.
Different sizes and configurations available.
No leads.

This product is ideal for the hobbyist who wants
to experiment with solar power or for the cheap
skate who can't stand buying retail. Just solder a
wire to the positive and negative ends and place
the panel in the Sun. DC power on tap.

SBT Designs
25840 IH-10 West #1
Boerne, Texas 78006
210-698-7109
FAX: 210-698-7147

[One or more binary attachments are retained only in the source text.]

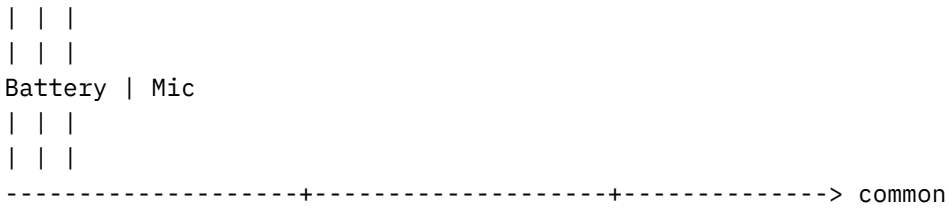
427. Re: Interface David Clarks to transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: "Alan D. Wilcox" <awilcox@suscom.net>
Message-ID: <38821B8A.77A04240@suscom.net>
Source record: 64049

gudmundur wrote:
>
> In article <3880799B.A0D2DAC3@suscom.net>, awilcox@suscom.net says...
> >
> >Hello,
> >
> >I'd like to use David Clark H10-20 (or the H10-60) headsets with
> >ham transceiver. They have electret microphone that needs a DC bias
> >voltage applied.
> >
> >Anyone have a schematic of audio circuit of aviation transmitter? Or
> >some thoughts on what circuitry I might kludge together to build
> >an interface?
> >
> >Many thanks,
> >
> >Alan, W3DVX
>
> No Problem,
>
> D.C. headphones are simple. first, the ear piece. they are low
> impedance. 8 to 10 ohms typical. So, that part is easy as you have
> probably found.
>
> Now the mike part. You need a source of 6 to 12 volts D.C. very
> noise free. Use a series resistor of perhaps 220 ohms and a cap of
> 100mfd or bigger to ground to create your noise free power supply.
> Now, all you need is a resistor to the 'hot' lead of the mike. I have
> found that 1k ohm works well. Then you will need an audio coupling
> cap into your 'original' mike circuit. 1uf to 10uf should work well
> for even the lowest impedance dynamic circuits. Some of the David
> Clarks have a small screw driver 'audio level' adjustment right on
> the mike. You may have to turn it down to avoid distortion in your
> tranceivers mike pre-amp circuit.

Many thanks! As I read this, here's what I'm thinking
you mean. Is this correct?

```
--------------------+---------------------
| | |
| | |
220 Ohm | 1000 Ohm
| | |
| | |
| 100 uF +---- 1 uF ----> audio out
```


| | |
| | |
Battery | Mic
| | |
| | |
--------------------+--------------------+--------------> common

428. Re: F.S. 1000 2N2222 Transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Greg Werstiuk <greg_werstiuk@email.msn.com>
Message-ID: <2SKCOGrhukcfiKMNH0AHd=aET14m@4ax.com>
Source record: 64050
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

You were mistaken. URL is www.taitron.net. .com was apparently
a;ready taken by a Taiwanese company selling computer
hardware/software.

On Fri, 14 Jan 2000 09:12:08 -0800, Jim Weir <jim@rst-engr.com> wrote:

>Greg Werstiuk <greg_werstiuk@email.msn.com>
>shared these priceless pearls of wisdom:
>
>->Jim -
>->
>->TO-92 (plastic) 2N2222 (mostly sold as PN2222) are dirt cheap.
>->
>->TO-18 (metal lcan) 2N2222 are far more expensive than $.025 each.
>->Been a while since I've priced them, but as I recall, in high volume,
>->they run around $.18 each.
>
>Try Taitron in Santa Clarita CA and see if they are still 18c each.
>www.taitron.com if I'm not mistaken.
>
>Jim
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

429. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <85t9g3bua1@newcastle.cs.ubc.ca>
Source record: 64051

Paul Keinanen <keinanen@sci.fi> writes:

>Millimeter waves 1 .. 10 mm = 300 .. 30 GHz = EHF
>Centimeter waves 1 .. 10 cm = 30 .. 3 GHz = SHF
>Decimeter waves 1 .. 10 dm = 3 .. 0.3 GHz = UHF
>Meter waves 1 .. 10 m = 300 .. 20 MHz = VHF
>Decameter waves 10 .. 100 m = 30 .. 3 MHz = HF
>Hectometer waves 100 .. 1 km = 3 .. 0.3 MHz = MF
>Kilometer waves 1 .. 10 km = 300 .. 30 kHz = LF

>Yes, I have to admit that recently I have only seen references to
>kilometer, centimeter and millimeter waves.

That's because now only power-of-1000 prefixes are officially
encouraged, so you're supposed to say "10 m" rather than "decimeter".
In the same way, 100 mm is "in", while 10 cm is "out".

Dave

430. LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <38823EA4.25EDE590@izzy.net>
Source record: 64052
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

Hi Group!

I think I may need a LOW PASS filter to keep my emissions from interfering with the TV next door.
Here is the situation from the evidence presented so far.

Last week I had a multiband (multi dipole) inverted antenna up about 16 feet. It started looking very ugly so I built a multiband (three different quarter wave) vertical. Last week I received no complaints. This week I am told that my antenna is radiating into her TV. She hears my call sign on the unit with a fancy cable box in the living room. She does not hear me on the non cabled TV in the back room. Yesterday she did not hear me either and the verticals did not have a "counterpoise".

This morning I ran some 10/15 foot wires from the central ground point of the antenna out to a distance of 10 feet give or take to make a "ground plane". Now she hears something in the cable box.

Is there enough evidence here to suggest that the cable for the TV set is underneath my counterpoise? Or is the power line being invaded by my signal? If it were the power lines being polluted, would not the older TV in the back room be affected?

Would a LOW PASS filter that would allow nothing above 30 MHz to pass be sufficient or would anyone suggest moving the ground wires around?

Curtis Scholl
KG8SU

431. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <tVqCOPCaNx=m12v1zS8E=QntRoi1@4ax.com>
Source record: 64053
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

On Sun, 16 Jan 2000 16:56:52 -0500, Curtis Scholl <cscholl@izzy.net> wrote:
> Would a LOW PASS filter that would allow nothing above 30 MHz to
>pass be sufficient or would anyone suggest moving the ground wires
>around?

I'm doubtful that a low pass filter on your transmitter will do any good. This sounds like typical fundamental overload to me. If you were radiating harmonics, they would show up on specific frequencies, and would move as you tuned to different frequencies. That doesn't sound like what's happening. The fact that the over the air TV is unaffected reinforces this conclusion.

You're just coupling enough amateur frequency signal into her cable box to cause this symptom. What you need to figure out now is how it is getting in, and how to stop it. (Actually, it isn't legally your problem. It is the cable company and your neighbor's problem. But trying to be helpful in solving the problem is a good neighbor policy.)

The signal could be getting into the cable box either via common mode on the cable or via the power line. Since the problem didn't exist when you were running a horizontal antenna, but does now that you're running a vertical, you need to look around and see how the relationship between your antenna patterns and the cable and power lines have changed. It is likely that you now have a current loop paralleling one or the other now when you didn't before.

Unless you want to change your antenna system again, you can try ferrite filters on the power cord and cable at the offending cable box. (Providing the neighbor will let you do that.) There's no filter you can add to your transmitter which will help.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

432. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38826C84.A90315ED@bellsouth.net>
Source record: 64054
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

Curtis Scholl wrote:

> Hi Group!
>
> I think I may need a LOW PASS filter to keep my emissions from
> interfering with the TV next door.
> Here is the situation from the evidence presented so far.
>
> Last week I had a multiband (multi dipole) inverted antenna up about
> 16 feet. It started looking very ugly so I built a multiband (three
> different quarter wave) vertical. Last week I received no complaints.
> This week I am told that my antenna is radiating into her TV. She hears
> my call sign on the unit with a fancy cable box in the living room. She
> does not hear me on the non cabled TV in the back room. Yesterday she
> did not hear me either and the verticals did not have a "counterpoise".
>
> This morning I ran some 10/15 foot wires from the central ground
> point of the antenna out to a distance of 10 feet give or take to make a
> "ground plane". Now she hears something in the cable box.
>
> Is there enough evidence here to suggest that the cable for the TV
> set is underneath my counterpoise? Or is the power line being invaded by
> my signal? If it were the power lines being polluted, would not the
> older TV in the back room be affected?
>
> Would a LOW PASS filter that would allow nothing above 30 MHz to
> pass be sufficient or would anyone suggest moving the ground wires
> around?
>
> Curtis Scholl
> KG8SU

I sincerely doubt your problem is harmonic radiation- this being the ONLY problem that an LPF would solve. Sounds more like fundamental overload of the TV (HPF) or common mode (ferrite chokes).

Dale W4OP

433. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Cortland Richmond <ka5s@saber.net>
Message-ID: <38827991.17A45F0@saber.net>
Source record: 64055
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

A properly operating cable system would not pick up radiated signals.
However, I'd say your neighbor will need to install an AC power filter. She
may need to filter not just the cable box, but also devices hooked up to it.

Cortland

Curtis Scholl wrote:

> Hi Group!
>
> I think I may need a LOW PASS filter to keep my emissions from
> interfering with the TV next door.
> Here is the situation from the evidence presented so far.
>
> Last week I had a multiband (multi dipole) inverted antenna up about
> 16 feet. It started looking very ugly so I built a multiband (three
> different quarter wave) vertical. Last week I received no complaints.
> This week I am told that my antenna is radiating into her TV. She hears
> my call sign on the unit with a fancy cable box in the living room. She
> does not hear me on the non cabled TV in the back room. Yesterday she
> did not hear me either and the verticals did not have a "counterpoise".
>
> This morning I ran some 10/15 foot wires from the central ground
> point of the antenna out to a distance of 10 feet give or take to make a
> "ground plane". Now she hears something in the cable box.
>
> Is there enough evidence here to suggest that the cable for the TV
> set is underneath my counterpoise? Or is the power line being invaded by
> my signal? If it were the power lines being polluted, would not the
> older TV in the back room be affected?
>
> Would a LOW PASS filter that would allow nothing above 30 MHz to
> pass be sufficient or would anyone suggest moving the ground wires
> around?
>
> Curtis Scholl
> KG8SU

434. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: David Rich <kgOus@swbell.net>
Message-ID: <3882A6C6.96DB5230@swbell.net>
Source record: 64056
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

I had a problem where the audio from my transmitter would come through the speakers on my television, hi-fi vcr, stereo with surround combination if I have the dolby surround "ON". The television receives it signal from a yagi on the roof. I use a R7 vertical not too far away. The interfering sound is not to loud and goes away when I turn the Dolby surround "OFF". My transmitter does interfere with the television picture a little mostly when I am on 20 meters phone and the television is on channel 4. I have tried Radio Shack and Vectronics HP filters on the TV and VCR and wrapping the speaker wires with ferrite but it does not seem to really help. The Vectronics has both a HP filter and ferrite core for common mode. It is not that bad of interference but I would like to get rid of it. Do you think wrapping the AC cord with a ferrite filter would help? I am only concerned about the sound interference. I guess I could try the old LC 100 uH choke and .001 uF shunt cap on the speaker side trick. I hate to go through all that work to see that it does not help one bit.

Since my shack is in the basement I use a cold water pipe for ground. I have a ground rod next to the R7's antenna mast. I strap the ground rod to the cold water pipe also. I also have a Alpha Delta Transi-Trap lightning protection device in-line with the HF cable. The lightning protection device is strapped to the cold
water pipe as well.

73 Dave KG0US

Cortland Richmond wrote:

> A properly operating cable system would not pick up radiated signals.
> However, I'd say your neighbor will need to install an AC power filter. She
> may need to filter not just the cable box, but also devices hooked up to it.
>
> Cortland
>
> Curtis Scholl wrote:
>
> > Hi Group!
> >
> > I think I may need a LOW PASS filter to keep my emissions from
> > interfering with the TV next door.
> > Here is the situation from the evidence presented so far.
> >
> > Last week I had a multiband (multi dipole) inverted antenna up about
> > 16 feet. It started looking very ugly so I built a multiband (three
> > different quarter wave) vertical. Last week I received no complaints.
> > This week I am told that my antenna is radiating into her TV. She hears

> > my call sign on the unit with a fancy cable box in the living room. She
> > does not hear me on the non cabled TV in the back room. Yesterday she
> > did not hear me either and the verticals did not have a "counterpoise".
> >
> > This morning I ran some 10/15 foot wires from the central ground
> > point of the antenna out to a distance of 10 feet give or take to make a
> > "ground plane". Now she hears something in the cable box.
> >
> > Is there enough evidence here to suggest that the cable for the TV
> > set is underneath my counterpoise? Or is the power line being invaded by
> > my signal? If it were the power lines being polluted, would not the
> > older TV in the back room be affected?
> >
> > Would a LOW PASS filter that would allow nothing above 30 MHz to
> > pass be sufficient or would anyone suggest moving the ground wires
> > around?
> >
> > Curtis Scholl
> > KG8SU

435. Antenna software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: larryc@northwest.com
Message-ID: <3882A5A5.6D67@northwest.com>
Source record: 64057

Any suggestions for antenna software to purchase? I am interested in designing and stacking yagi antennas. I hv win98 and a 400mhz celeron processor in the computer.

thanks. reply here in the newsgroup or privately

436. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <YqdJ$SAJ1jg4EwJc@ifwtech.demon.co.uk>
Source record: 64058

William E. Sabin wrote:
>
>
>Ian White, G3SEK wrote:
>
>> And the editing. Everybody's writing benefits from some critical review,
>> which you get from an editor when you're writing for a good magazine.
>> However, it's totally lacking from most articles published on the web.
>
>In the discussion groups, articles usually tend to be ad hoc and extemporaneous.
>In a
>published article the author has wrestled with his material at much greater
>length,
>perhaps months or even years. On the internet we all need to be tolerant of
>quick
>responses. One thing I like about discussion threads is that insight and
>knowledge
>improve, errors get fixed, as the threads proceed.
>
Yes, that's very true of rec.radio.amateur.etc and the various mailing
lists. Since substantial numbers of amateurs have gained access to the
Internet, many problems that have hung around for years have been
thrashed out and - if not settled - at least the essential points
identified.

But that doesn't apply to web publishing because it doesn't have the
same built-in opportunity for public discussion. Unfortunately many
people don't "wrestle with their material" - they just publish it.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

437. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <ff2g4.3722$3b6.17939@ozemail.com.au>
Source record: 64125

the pathetic size of QEX makes it a poor buy. Those one or two good articles would hardly be ever noticed in QST. In fact QEX ANd national contest journal could all be put into QST. It would make the magazine more appealing. People seem to forget how great ham radio magazine was, it had good general technical information as well as good technical articles. Its failure was it did not have enough general articles like QST. This combo of technical accurate as well general articles would work. It wont happen since all these publications is a money making scam like the antenna handbook and the ARRL handbook. Full of misinformation and highly inaccurate material, it gets repeated year after year with same errors. This is from a organisation thats is supposed to be technically correct.
Will White <kd7bfx@mindspring.com> wrote in message news:38805B3F.458B4B97@mindspring.com...
> And very unlikely, given the new TOC introduced in the 1/2000 issue of
> QST. As far as I can tell, the emphasis on technical matters is being
> shifted towards tubes and QRP. That is fine by me, but it is definitely
> not in the direction of development and innovation.
>
> Will
> KD7BFX
>
> Roy Lewallen wrote:
>
> In fact, though, only a tiny fraction of amateurs are
> > really interested in technical material of the level found in QEX or
> > Communications Quarterly. So putting this material into QST in place of
> > content which is of interest to a much larger fraction of the readers
> > would be a foolish thing for the ARRL to do, much as you and I might
> > like it.

438. Re: Mitrek"Motorola?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Karl <kshoe@juno.com>
Message-ID: <3881FFEB.4882@juno.com>
Source record: 64126

I think it's about 12 amp, max. Run over to my page, then to
links, then to kuggie.com (it's about the 4th link down the list)
There is a lot of Motorola tips, links and reflectors, there
'73
Karl WA7YCP

http://www.dalek.org/srg

439. mobile verticle ant question (opinions?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <OS8g4.2449$NU6.36589@tw12.nn.bcandid.com>
Source record: 64127

Have you seen the 'fad' of truckers tilting their 1/4 verticles forward at a 45 degree angle? As a broadcast engineer of over 13 years experience I thought this was the dumbest thing I ever saw. Well, guess what? I drive truck now (and make far more money BTW) and I tried the 'tilt' thing. It actually works!! Why??? I am thinking that it gets the high impedance end of the ant away from the trailer. It should work far worse in this tilted mode, but it works no less than 1/2 'S' unit better in most cases, and seems to enhance my range by perhaps 1 mile minimum. So, what goes??
73 Gummi.

440. Re: Interface David Clarks to transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <d49g4.2468$NU6.36589@tw12.nn.bcandid.com>
Source record: 64128

In article <3880799B.A0D2DAC3@suscom.net>, awilcox@suscom.net says...
>
>Hello,
>
>I'd like to use David Clark H10-20 (or the H10-60) headsets with
>ham transceiver. They have electret microphone that needs a DC bias
>voltage applied.
>
>Anyone have a schematic of audio circuit of aviation transmitter? Or
>some thoughts on what circuitry I might kludge together to build
>an interface?
>
>Many thanks,
>
>Alan, W3DVX

No Problem,

D.C. headphones are simple. first, the ear piece. they are low impedance. 8 to 10 ohms typical. So, that part is easy as you have probably found.

Now the mike part. You need a source of 6 to 12 volts D.C. very noise free. Use a series resistor of perhaps 220 ohms and a cap of 100mfd or bigger to ground to create your noise free power supply. Now, all you need is a resistor to the 'hot' lead of the mike. I have found that 1k ohm works well. Then you will need an audio coupling cap into your 'original' mike circuit. 1uf to 10uf should work well for even the lowest impedance dynamic circuits. Some of the David Clarks have a small screw driver 'audio level' adjustment right on the mike. You may have to turn it down to avoid distortion in your tranceivers mike pre-amp circuit.

441. Calculate transistor amplifier input impedance?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38812a12.86182663@news.online.no>
Source record: 64129

how is input impedance calculated for an inverting amplifier with shunt feedback?

Wish to use an amplifier consisting of 2x 2N2222 (BC238), the first is common emitter stage, with 100 ohm emitter resistor (no decoupling) and 4700 ohm collector load, the second stage is emitter follower and the feedback is 1/5.7 (47k from last emitter to first base, and 10k to ground)

it is supposed to be used for 1.5kHz meter amplifier in 136kHz measuring equipment, input voltage is 0.2V RMS

hpe to hear from you sn

73
Jan-Martin LA8AK

442. Screwdriver Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: kb9qec@shawneelink.net
Message-ID: <38814f9e.17232324@news.shawneelink.net>
Source record: 64130

For Sale 1 complete 10-80 meter homebrew moble screwdriver antenna,and
2 wound coils to make 2 more antennas. The screwdriver has a mount on
it that will slide into a reese receiver hitch,and I will sell it for
$150.00 shipped in the U.S. The coils are $30.00 shipped in the
U.S.You can email me at kb9qec@shawneelink.com

443. FA: High voltage Power Supply Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <%Zag4.484$en6.4662059@server2.news.adelphia.net>
Source record: 64131

Paeco model 4026. Dual primary winding for 115 or 230 volts. Secondary windings are as follows... 920 VCT at 100 mA, 5 V at 2 A, 5 V at 6 A, 6.3 V at 8 A, 6.3 V at 6 A, and 6.3 V at 6 A. All connections are via solder posts on a terminal strip. Mounting is via 4 bolts which are included. I checked all the windings with an ohm meter and they check out OK.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232503652

444. Re: mobile verticle ant question (opinions?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <g%ag4.2763$NU6.52635@tw12.nn.bcandid.com>
Source record: 64132

In article <Pine.GSO.3.95.1000115182511.13708B-100000@oso.slonet.org>,
cbuttsch@slonet.org says...
>
>Seems like you missed it then and missed it now!
>
>On Sun, 16 Jan 2000, gudmundur wrote:
>
>> Have you seen the 'fad' of truckers tilting their 1/4 verticles

And so what the hell is the 'IT' that I have missed???? I would
not have belived 'IT' would work. But i tried 'IT' and I tell you
there was an improvement that could be measured. Unlike the 'IT'
that 'Audio Pills' claim to be able to 'hear' with their calibrated
ears. I would have assumed (let me take the moment to make an ASS
of U and ME) that 'IT' would behave predictably. Like the 9 db loss
for incorrect circular polarization, or the 20 db loss for improper
H/V polarization. Tilting the antenna seems counter produtive.

Oh please, Oh please, if you know of, or in fact control this
mythical 'IT' that I have missed, please tell so that me and many
like me can elevate to your 'Elmerness' and good standing with
the wavelords of the ether.
73

445. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: maddog@io.com
Message-ID: <38813d33.30795044@news.io.com>
Source record: 64133

On Tue, 11 Jan 2000 14:39:19 -0500, Brad Thompson
<brad.thompson@valley.net> wrote:
[snip]
>Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
>construction magazine, catering to audio/radio/robotics/model aircraft/amateur
>telephony
>and tesla coils-- all at a level supported by whatever components you can still
>purchase
>off-the-rack at Radio Shack.
>
>Dark days are indeed upon us....

Well, maybe not. The advent of personal web pages on the Internet has
put a lot of construction articles within easy reach of the masses,
and the subscription rate is just right.

Maybe all we're losing is the paper and the advertising...

73,
monty N5FC

446. FA: Digital Multimeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <sebg4.489$en6.4693626@server2.news.adelphia.net>
Source record: 64134
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,sci.electronics.equipment

Sinclair model DM 350 multimeter. Measures AC and DC voltage from 1 mV to 1200 volts, current from 1 microA to 2 A, and resistance from 1 ohm to 20 megohms. 3 1/2 digit LED display. Banana input jacks. Powered by wall transformer (included) or 4 size C cells. Works great.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232526164

447. FA: RG 8/U Coaxial Cable - 100 ft. - NEW

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <iabg4.486$en6.4685844@server2.news.adelphia.net>
Source record: 64135
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=232510363

448. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: maddog@io.com
Message-ID: <38813f1e.31285611@news.io.com>
Source record: 64136

On Wed, 12 Jan 2000 01:04:16 GMT, MC 10kW Jesus <qsl27@hotmail.com>
wrote:

>[snip] If you want some meat and potatoes radio technical
>digest, you'll have to subscribe to some of the trade journals that deal with
>broadcast, mobile and microwave radio. They are free to those in the industry -
>and well worth the price! :->

Well, MC, I can't agree about the trade journals. While they are
valuable for keeping abreast of the latest technology (systems
engineering advances and new ICs), they're *really* light on practical
electronics and construction, and technical discussions are generally
non-specific, full of generalities and block diagrams of things they
wish would work, and glassy-eyed promises about upcoming products that
are usually unavailable to hobbyists and experimenters.

I prefer schematics, pictures, measurements, explanations, and
practical guidelines. As a hobbyist, I look to magazines like
CommQuart, QST, QEX, SPRAT, and the like, and Internet web sites. As
a professional, I look to data sheets and application notes (usually,
by the way, also available on the web)

73,
monty N5FC

449. Re: Low Power Design Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: maddog@io.com
Message-ID: <38814370.32392330@news.io.com>
Source record: 64137

On Tue, 11 Jan 2000 11:54:26 GMT, py1ll@my-deja.com wrote:

>In article <38790397.C644F4AF@cwcom.net>,
> Duncan Walters <tesla@cwcom.net> wrote:
>> I want to build a simple no-frills basic CW transmitter for any single
>> HF band
>> 40 thru 10m.
[snip]
>Use a CMOS inverter-gate crystal oscillator and filter its output as to
>harmonics.

Luiz:

Have you done this? You've gotten a CMOS inverter to oscillatate 7-28
MHz when operated from 3 Volts or less? Even if you could, could you
deliver any power?

Just asking, I've not tried it...

73,
monty N5FC

450. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: maddog@io.com
Message-ID: <388146cf.33254735@news.io.com>
Source record: 64138

On Wed, 12 Jan 2000 09:40:44 GMT, "mike" <ipas.m@netclic.fr> wrote:

>Hi
>I ' m a new ham

Hey! Congrats! Welcome to the "club"!

>and i would like to make a 1 kw power amplifier
>for decametric's frequencies
>but i havn't any schematic or pcb ...

I'm an old ham, but I have no idea what a "decametric frequency"
is... please excuse my ignorance.

73,
monty N5FC

451. Re: Calculate transistor amplifier input impedance?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: k7itm@aol.com.nospam
Message-ID: <20000116012435.17625.00000125@ng-cb1.aol.com>
Source record: 64139

Jan-Martin asks:

>how is input impedance calculated for an inverting amplifier with
>shunt feedback?
>
>Wish to use an amplifier consisting of 2x 2N2222 (BC238), the first is
>common emitter stage, with 100 ohm emitter resistor (no decoupling)
>and 4700 ohm collector load, the second stage is emitter follower and
>the feedback is 1/5.7 (47k from last emitter to first base, and 10k to
>ground)

One way to think about this: if you force the input 1 millivolt higher, what change in current happens at the input? For your case, the first stage gain must be pretty close to -4700/100 = -47. Assume the emitter follower stage has unity gain, so with a 1 millivolt input change, the output drops by 47 millivolts. The voltage divider to the base makes that look like 47mV/5.7 = 8.25 millivolts, at a source impedance of 10k in parallel with 47k which happens to be 8.25k in this case...that's just a coincidence. So the input current changed by 1.0 microamps for a 1.0 millivolt change, and that's 1.0kohms. For completeness, you must also factor in the input stage base input resistance, which must be about 100 ohms times the transistor beta, or maybe 10 to 20 kohms. So the net input impedance must be a bit below 1kohms.

Cheers,
Tom

452. 220V Variac Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: ditdah <ditdah@fastlane.net>
Message-ID: <15D7DDBA06807905.595C7F7CD4FB5F8C.7CAF2448E609862C@lp.airnews.net>
Source record: 64140

What do you have, what condition, and how much are you asking for it?
Thanks, Ed-KV5i

453. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Ron Cook <roncook@att.net>
Message-ID: <fa638s4nv38u30i2au4rqeio4kj6ng5a0c@4ax.com>
Source record: 64141

I'd read that as "10 meters" ?

On Sun, 16 Jan 2000 04:21:18 GMT, maddog@io.com wrote:

>On Wed, 12 Jan 2000 09:40:44 GMT, "mike" <ipas.m@netclic.fr> wrote:
>
>>and i would like to make a 1 kw power amplifier
>>for decametric's frequencies
>>but i havn't any schematic or pcb ...
>
>I'm an old ham, but I have no idea what a "decametric frequency"
>is... please excuse my ignorance.
>
>73,
>monty N5FC

Ron n1zhi
roncook@att.net
cook@amsa.com (office)
ICQ: 26516311

454. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <1nv28ssfm2a2i1ik2qeo0la7npfj44ccmg@4ax.com>
Source record: 64142

On Sun, 16 Jan 2000 04:21:18 GMT, maddog@io.com wrote:

>On Wed, 12 Jan 2000 09:40:44 GMT, "mike" <ipas.m@netclic.fr> wrote:
>
>>Hi
>>I ' m a new ham
>
>Hey! Congrats! Welcome to the "club"!
>
>>and i would like to make a 1 kw power amplifier
>>for decametric's frequencies
>>but i havn't any schematic or pcb ...
>
>I'm an old ham, but I have no idea what a "decametric frequency"
>is... please excuse my ignorance.

Apparently the metric system is not well known on your side of the
Pond.

Millimeter waves 1 .. 10 mm = 300 .. 30 GHz = EHF
Centimeter waves 1 .. 10 cm = 30 .. 3 GHz = SHF
Decimeter waves 1 .. 10 dm = 3 .. 0.3 GHz = UHF
Meter waves 1 .. 10 m = 300 .. 20 MHz = VHF
Decameter waves 10 .. 100 m = 30 .. 3 MHz = HF
Hectometer waves 100 .. 1 km = 3 .. 0.3 MHz = MF
Kilometer waves 1 .. 10 km = 300 .. 30 kHz = LF

Yes, I have to admit that recently I have only seen references to
kilometer, centimeter and millimeter waves. Hectometer band/waves has
been used in some languages to refer to the medium wave broadcast
band.

Hope this helps.

Paul OH3LWR

455. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3881b867.122625184@news.online.no>
Source record: 64143

On Sun, 16 Jan 2000 05:31:02 -0500, Ron Cook <roncook@att.net> wrote:

>I'd read that as "10 meters" ?
>
>
>On Sun, 16 Jan 2000 04:21:18 GMT, maddog@io.com wrote:
>
>>On Wed, 12 Jan 2000 09:40:44 GMT, "mike" <ipas.m@netclic.fr> wrote:
>>
>>>and i would like to make a 1 kw power amplifier
>>>for decametric's frequencies
>>>but i havn't any schematic or pcb ...
>>
>>I'm an old ham, but I have no idea what a "decametric frequency"
>>is... please excuse my ignorance.
>>
>>73,
>>monty N5FC
>
>Ron n1zhi
>roncook@att.net
>cook@amsa.com (office)
>ICQ: 26516311

isnt it strange -
one very often see newcomers who want to build complex rigs while they
are usually expected to do something simple

perhaps it has something to do with the age....where the newcomers
above 60 need something simple, hi

Personally, when I was at an age of 14 I found most of the newcomer's
circuits to be rather boreing, perhaps I started too soon.....

I have also learnt a few french words since then

73
Jan-Martin
LA8AK

456. Dragon SS-485+ 10meter Transceiver information Required

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Kevin Mitchell <sparc@ihug.co.nz>
Message-ID: <85t77i$2sm$1@news.ihug.co.nz>
Source record: 64059

Hi All,

I am looking for any mods, information etc for the Dragon SS-485+ 10meter tranceiver.
I have one, but have found that it has a few short comings in it, ie. you can not scan while in memory mode, depending on what step you are in, it will only scan that 10's portion. What I mean is that if you set the step to 10khx, and the freq is set to say 28.500, it will get to 28.590 and then go back to 29.500 and start again. Sometimes a good idea, but it should carry on up, 28.590, 29.600, 29.610 etc.

Anyone got any ideas.

Regards

Kevin, ZL1UDD.

sparc@ihug.co.nz

457. Ham/electronics "show"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: wd5gnr@my-deja.com
Message-ID: <85tr3l$ah5$1@nnrp1.deja.com>
Source record: 64060

If you have RealAudio, have a look at:
http://www.givemetalk.com/default.asp?
ASPName=displaySeries.asp&ArgName=SeriesID&ArgVal=372

73

WD5GNR

Sent via Deja.com http://www.deja.com/
Before you buy.

458. Re: Antenna software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <0Uzg4.4640$3b6.21608@ozemail.com.au>
Source record: 64061

ELNEC is what i like, mainly because of its simplicity. Roy has a windows version coming out soon. All my PCs have Windows and i hate buying DOS software. This is the main reason i dont use Brian Beezleys programs, i wish some of these software vendors would catch up on the latest operating systems.

<larryc@northwest.com> wrote in message news:3882A5A5.6D67@northwest.com...
> Any suggestions for antenna software to purchase? I am interested in
> designing and stacking yagi antennas. I hv win98 and a 400mhz celeron
> processor in the computer.
>
> thanks. reply here in the newsgroup or privately

459. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <uah58scsrfet63l8uvbsul4ci693j3mfd1@4ax.com>
Source record: 64062
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

On Sun, 16 Jan 2000 16:56:52 -0500, Curtis Scholl <cscholl@izzy.net>
wrote:

>This week I am told that my antenna is radiating into her TV. She hears
>my call sign on the unit with a fancy cable box in the living room. She
>does not hear me on the non cabled TV in the back room. Yesterday she

Did this happen on all TV channels ? Was the picture affected ?

If the picture is not affected and the problem occurs on all channels,
then this is an audio break through directly into the audio system of
the TV.

Are there external speakers connected to the TV ? If so, disconnect
the external speaker wires from the TV and the interference is not
heard on the internal speaker, the problem is audio break through from
the speaker cables. If there are no external speakers, then most
likely, the interference comes through the power line and wrapping the
power cord around a ferrite bar should reduce that interference.

Paul OH3LWR

460. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <jqf58s4vp5bgj4eo5oa63vnpgupubldfpg@4ax.com>
Source record: 64063

On 16 Jan 2000 12:25:39 -0800, davem@cs.ubc.ca (Dave Martindale)
wrote:

>>Yes, I have to admit that recently I have only seen references to
>>kilometer, centimeter and millimeter waves.
>
>That's because now only power-of-1000 prefixes are officially
>encouraged, so you're supposed to say "10 m" rather than "decimeter".

Make that decameter :-).

The real reason is that nobody is talking about wavelengths anymore
when referring to a specific emission, except radio astronomers (and
radio amateurs :-). Thus, it does not make much sense to talk about
wavelength bands.

>In the same way, 100 mm is "in", while 10 cm is "out".

The cm is still quite common over here and so is hectopascals (to give
the same numeric value as millibars, used only in weather reports),
but apart from that, power of 1000 prefixes are used also here in
Finland.

Anyway, the original poster apparently asked about a 1 kW HF
amplifier, but no-one have commented on that.

Paul OH3LWR

461. earn money

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: kampret@hotmail.com
Message-ID: <8EBE4D7B3kampret@204.210.252.254>
Source record: 64064
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet

earn money surfing web go to
http://www.spedia.net/cgi-bin/tz.cgi?run=show_svc&fl=8&vid=534466

easy $100+

462. K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000117075015.18034.00001030@ng-ft1.aol.com>
Source record: 64065

In the last few days K1BQT has resorted to death threats against me.

This is a VERY serious situation.

PLEASE! If you are a friend of K1BQT, or just an acquiantance, TALK WITH HIM!
Calm him DOWN!

The man has a gun collection, lives an hour from me, and is clearly sending
messages telling what he wants to do. ('Chips Final Act'; 'North End
Solution'; and so on).

PLEASE! For HIS SAKE--talk with him.

Thanks!

Chip N1IR

463. Re: IC-751

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: CU2IJ <rdd87728@mail.telepac.pt>
Message-ID: <85v1uiibf1@pthp35.telecom.pt>
Source record: 64066
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

It worked for my case. Icom Spain sent copies of a IC-211E manual at my request.

Luis Pacheco,

CU2IJ

Tom wrote in message ...
>Have you tried Icom ??
>
> Tom
>
>
>Bill and Tracy <tmbc@nf.sympatico.ca> wrote in message
>news:9otf4.57398$Ke.54194@news21.bellglobal.com...
>> Does anyone know where I could buy or get a copy of the manual for the
>Icom
>> IC-751? Thanks.
>>
>>
>
>

464. SB-230 Relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: David Abshire <D.R.Abshire@worldnet.att.net>
Message-ID: <85vas7$8p6$1@bgtnsc03.worldnet.att.net>
Source record: 64067
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am rebuilding this amp and I am looking for a (NEW) relay
(To Buy) for a Heathkit SB-230 Amp.

Any one know where I may order this?

Heath Part # 69-55
3 Pole Double Throw

Stamped on the relay;
Potter & Brumfield
DIV., AMF U.S.A.
KA-3702 110v DC

I have one from a SB-220 but can't get it to activate, Has anyone
ever done a retrofit of one of these?

Tnx
Dave

465. schematic diagram Kenwood TR-7400A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Renato <renato@numerica.it>
Message-ID: <85vbhq$ll6$2@fe1.cs.interbusiness.it>
Source record: 64068

I am searching the schematic diagram of a transceiver
Kenwood TR-7400A (an old FM transceiver)
can you help me?

73 de Renato ik2wys

note that my right e-mail address is:
renato.favero@
and the same provider

466. searching a CPU for a Yaesu 757GX (first serie)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Renato <renato@numerica.it>
Message-ID: <85vbi5$ll6$3@fe1.cs.interbusiness.it>
Source record: 64069

Hi!
I am searching a CPU for a Yaesu 757GX (first serie).
I think that it is the same of Sommerkamp 757GH
Can you help me? Have you it? Do you Know where can i buy it?

Thanks for all the info!
Note that my e-mail address is modified and the right is
renato.favero@
and the same provider!!!

73 de Renato ik2wys

467. Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: kd8gt <bubba@somewhere.com>
Message-ID: <fgd68sssgfasl2cegckl0spupr4f6if4jf@4ax.com>
Source record: 64070

My computer monitor is very dirty, producing a buzzing ac noise about 10 kcs wide at every 50 kcs on ALL the HF bands on all my hf receivers. It doesn't effect VHF. I doesn't matter if a rig is next to it or across the room, it's the same. I have isolated it to the monitor, turning it off, eliminates the noise so it's not the computer. Turning monitor off is not a option as I want to use it for logging. Rigs are grounded good to a earth ground. Any suggestions, short of buying different monitor? By the way it's not a cheap monitor, 400 dollar range 17". Suggestions please?

468. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <nkHg4.31524$Lf2.789541@news6.giganews.com>
Source record: 64071

A smaller monitor might be cleaner, since the high voltage would be less. You can try ferrite cores on the cables, line the case with metal and ground it, add a power line filter, and so on. It's often a losing battle. And if it's a new monitor you can return it for warranty as they are required to be fairly clean by FCC. Try connecting the computer ground to the rig ground.

You might have to buy a different monitor.

73, Bob K6DDX

469. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38834f3a.13947903@news.mindspring.com>
Source record: 64072

Have you contacted law enforcement?

Russ - KF4WXD

fractenna@aol.com (Fractenna) wrote:

>In the last few days K1BQT has resorted to death threats against me.
>
>This is a VERY serious situation.
>
>PLEASE! If you are a friend of K1BQT, or just an acquiantance, TALK WITH HIM!
>Calm him DOWN!
>
>The man has a gun collection, lives an hour from me, and is clearly sending
>messages telling what he wants to do. ('Chips Final Act'; 'North End
>Solution'; and so on).
>
>PLEASE! For HIS SAKE--talk with him.
>
>Thanks!
>
>Chip N1IR
>
>
>

470. Re: Calculate transistor amplifier input impedance?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38824cc9.160617625@news.online.no>
Source record: 64073

On 16 Jan 2000 06:24:35 GMT, k7itm@aol.com.nospam (K7ITM) wrote:

>Jan-Martin asks:
>
>>how is input impedance calculated for an inverting amplifier with
>>shunt feedback?
>>
>>Wish to use an amplifier consisting of 2x 2N2222 (BC238), the first is
>>common emitter stage, with 100 ohm emitter resistor (no decoupling)
>>and 4700 ohm collector load, the second stage is emitter follower and
>>the feedback is 1/5.7 (47k from last emitter to first base, and 10k to
>>ground)
>
>One way to think about this: if you force the input 1 millivolt higher, what
>change in current happens at the input? For your case, the first stage gain
>must be pretty close to -4700/100 = -47. Assume the emitter follower stage has
>unity gain, so with a 1 millivolt input change, the output drops by 47
>millivolts. The voltage divider to the base makes that look like 47mV/5.7 =
>8.25 millivolts, at a source impedance of 10k in parallel with 47k which
>happens to be 8.25k in this case...that's just a coincidence. So the input
>current changed by 1.0 microamps for a 1.0 millivolt change, and that's
>1.0kohms. For completeness, you must also factor in the input stage base input
>resistance, which must be about 100 ohms times the transistor beta, or maybe 10
>to 20 kohms. So the net input impedance must be a bit below 1kohms.
>
>
>
>Cheers,
>Tom
>
many thanks, and gain is 5.7 when the amplifier is fed from high
impedance (without taking in account the loss one has), and has higher
gain the lower the generator's impedance is? Gain limit is somewhat
lower than 47.

Is it a similar way to calculate the output impedance? Output voltage
is 6V over 2200 ohm. I would say that output impedance without the
feedback is (4700+rb)/hfe. hfe for BC238 is at least 200, and rb is
supposed to be 1k, so I believe it is 27 ohm - without feedback.

73 Jan-Martin
LA8AK

471. PC Based Ham Radio Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Wolfman <NoSpam@stopspam.spam>
Message-ID: <85vr3q$l80$1@nntp5.atl.mindspring.net>
Source record: 64074

I've seen 'em albeit I haven't looked closely. Does anyone know of or have feedback on Software based Ham Radio. I suspect there would be some hardware to go along with it. Let me know your thoughts.

Todd

472. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <38837411.2729CBB7@netdoor.com>
Source record: 64075

Have you given any thought to killing him first? Think about it!

Bad Butch

Fractenna wrote:

> In the last few days K1BQT has resorted to death threats against me.
>
> This is a VERY serious situation.
>
> PLEASE! If you are a friend of K1BQT, or just an acquiantance, TALK WITH HIM!
> Calm him DOWN!
>
> The man has a gun collection, lives an hour from me, and is clearly sending
> messages telling what he wants to do. ('Chips Final Act'; 'North End
> Solution'; and so on).
>
> PLEASE! For HIS SAKE--talk with him.
>
> Thanks!
>
> Chip N1IR

473. Re: mobile verticle ant question (opinions?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <388388F8.437A753A@corecomm.net>
Source record: 64076

```
gudmundur wrote:
> Have you seen the 'fad' of truckers tilting their 1/4 verticles
> forward at a 45 degree angle? As a broadcast engineer of over 13
> years experience I thought this was the dumbest thing I ever saw.
> Well, guess what? I drive truck now (and make far more money BTW)
> and I tried the 'tilt' thing. It actually works!! Why??? I am
> thinking that it gets the high impedance end of the ant away from
> the trailer. It should work far worse in this tilted mode, but it
> works no less than 1/2 'S' unit better in most cases, and seems to
> enhance my range by perhaps 1 mile minimum. So, what goes??

I have a guess. I've never sat down to try to analyze it, and my antenna
knowledge probably isn't up to it anyway. But it seems to me that an
antenna tilted at a 45-degree angle off vertical would present 0.707
as much energy to a vertical antenna as another vertical would. And I'd
say with some certainty that anything you could do to get the antenna
to stop being parallel with a nearby large conducting surface would be
an improvement of some sort. My guess would be that the loss would be
offset by the benefit of getting non-parallel to the trailer.

--
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

474. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1701001623400001@usrh-5-92.hip.cam.org>
Source record: 64077

I had to check an issue of Communications Quarterly to see if this guy
was really referring to Rick Littlefield, who's written quite a few
interesting articles for the ham magazines over the years. K1BQT is
is indeed Rick's callsign, so I have serious doubts that there is
any legitimacy to this post. And I just did some searching on dejanews,
and Fractenna started the same thread in rec.radio.amateur.antenna (too
often someone posts to many groups based on how important they think
the post is, and too often they are wrong. And if there is anything
worse than cross-posting, its posting the same message to multiple newsgroups
one at a time) and Rick there have been more suspicious responses over
there, where Fractenna is obviously a frequent poster. Rick even
answered in that thread, and I think people might want to go over
there and read his message before believing Fractenna's message.

I did browse through a few of previous messages to "Fractenna" and
did see the reference to 'Chips Final Act' and it seemed to be in a joking
tone, and it sure didn't read as a death threat.

Being a famous author doesn't make someone perfect, but I suspect
this post is an attempt to damage K1BQT, indeed some damage may have
already been done, rather than a real situation.

Michael VE2BVW

In article <20000117075015.18034.00001030@ng-ft1.aol.com>,
fractenna@aol.com (Fractenna) wrote:

> In the last few days K1BQT has resorted to death threats against me.
>
> This is a VERY serious situation.
>
> PLEASE! If you are a friend of K1BQT, or just an acquiantance, TALK WITH HIM!
> Calm him DOWN!
>
> The man has a gun collection, lives an hour from me, and is clearly sending
> messages telling what he wants to do. ('Chips Final Act'; 'North End
> Solution'; and so on).
>
> PLEASE! For HIS SAKE--talk with him.
>
> Thanks!
>
> Chip N1IR

475. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <38838ADC.1A3EDE50@corecomm.net>
Source record: 64078
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

Cortland Richmond wrote:
> A properly operating cable system would not pick up radiated signals.

Then again, a properly operating cable system would be an anomaly.

(Who, me? Cynical? Angry because the local leaky cable system spent years
with Discovery Channel, my landlord's favorite, on 144-150 MHz? Nawwww.)

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

476. FS: WONDERBAR RADIO FOR '57 CHEVIES - EXCELLENT!!! (fwd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Louis <lou1@primenet.com>
Message-ID: <Pine.BSI.3.96.1000117213751.15919I-100000@usr06.primenet.com>
Source record: 64079

www.ebay.com item 238999733

FS: wonderbar Radio for a '57 Chevrolet Belair, 210 and all related
models. It is in near-Mint condition! It has very recently been
totally restored electronically. All new circuits, capacitors,
tubes and totally checked overy by professional radio repairman.
The chrome is in very excellent condition - extremely shiny!
Everything works on this very rare radio.
All metal is in
really great condition. No rust. All checked out and ready to play
in your classic car. ..
I can send along the receipts I have for all work done. It is still in
original box from repairman. Due to the age it i sold AS IS. However, if
it fails to work when
installed it can be returned to the repairman to be fixed at no
cost except for parts.
Chrome is truly excellent but it does have a couple of tiny 'specs'
on the knobs. No fading at all on the chrome. Very shiny. Black
buttons are mint. Needs nothing! Tops of tubes have a nice shiny
chrome on the glass. These were not chrome plated but are a natural
part of many tubes. Lettering on "Wonderbar" switch is perfect.

lou@usna.net

477. FS: Microelectronic Circuits textbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: bcoast@hotmail.com
Message-ID: <8601lq$7e8$2@knot.queensu.ca>
Source record: 64080
Cross-posted to: sci.misc,alt.comp.hardware.homebuilt,rec.radio.amateur.homebrew,sci.electronics

I have Sedra/Smith's Microelectronic Circuits for sale on ebay. The starting bid is $5--I'm a poor university student trying to recoup some money.

It's a great text: 1042 pages covering from single diodes through analog IC design, including filters, transistor and mosfet circuits, op-amp design, and logic design. It is the definitive electronics textbook, used by Queen's and McGill elec eng programs (where I got mine).

Check it out at:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=236873482

I am also selling Demarest's Engineering Electromagnetics ($97 at Amazon--starting at $10) a great text covering basics up to antennas, transmission lines, and PCB EM effects:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=236868344

Thanks,
Andrew Barrow

478. Re: make a power amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38835696.228673104@news.online.no>
Source record: 64081

On Mon, 17 Jan 2000 10:20:03 +0200, Paul Keinanen <keinanen@sci.fi>
wrote:

>On 16 Jan 2000 12:25:39 -0800, davem@cs.ubc.ca (Dave Martindale)
>wrote:
>
>
>>>Yes, I have to admit that recently I have only seen references to
>>>kilometer, centimeter and millimeter waves.
>>
>>That's because now only power-of-1000 prefixes are officially
>>encouraged, so you're supposed to say "10 m" rather than "decimeter".
>
>Make that decameter :-).
>
>
so decameter means decimeter, or was it 10m?
>
>
>Anyway, the original poster apparently asked about a 1 kW HF
>amplifier, but no-one have commented on that.
>
some comments passed that someone believe it was 10+1m, if so it isn't
too difficult to understand why nobody cares to give further info
>Paul OH3LWR
>
JM LA8AK

479. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: JC Quinn <kc4ee@sonet.net>
Message-ID: <fzPg4.9025$CfWc.42402122@news5.usenetserver.com>
Source record: 64082

Check your refresh rate.(start/settings/control
panel/display/settings/advanced/adapter) If set at 60hz most any monitor
will trash an HF rig. See if your monitor will support 72 hz refresh and
try that and see if the noise goes away.
73
Jim
"kd8gt" <bubba@somewhere.com> wrote in message
news:fgd68sssgfasl2cegckl0spupr4f6if4jf@4ax.com...
> My computer monitor is very dirty, producing a buzzing ac noise about
> 10 kcs wide at every 50 kcs on ALL the HF bands on all my hf
> receivers. It doesn't effect VHF. I doesn't matter if a rig is next to
> it or across the room, it's the same. I have isolated it to the
> monitor, turning it off, eliminates the noise so it's not the
> computer. Turning monitor off is not a option as I want to use it for
> logging. Rigs are grounded good to a earth ground. Any suggestions,
> short of buying different monitor? By the way it's not a cheap
> monitor, 400 dollar range 17". Suggestions please?

480. LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <38837bbc.2999412@news.u-net.com>
Source record: 64083
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Attached is the National semiconductor circuit suggestion for a 1.5-30V constant current/constant voltage power supply. I like the circuit as a possible workbenchbench power supply. Two queries however: 1) the LM301A op amp shows 6 volt input plus Vcc. I asume the Vcc is 15volt, why the difference, shouldn't it be -15 volt and not 6v as shown?

2) the R8 voltage adjust potentiometer: any way of determining what its value should be?

Your help would be appreciated

481. FS on Ebay: Knight S-8A External Speaker - Matches R-100A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: alg460@aol.com
Message-ID: <20000117181729.01834.00000741@ng-fo1.aol.com>
Source record: 64084

Knight S-8A External Speaker - Matches R-100A

For Description and Picture See:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=239118993

482. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <3883B21B.92AE0938@bellsouth.net>
Source record: 64085

kd8gt wrote:

> My computer monitor is very dirty, producing a buzzing ac noise about
> 10 kcs wide at every 50 kcs on ALL the HF bands on all my hf
> receivers. It doesn't effect VHF. I doesn't matter if a rig is next to
> it or across the room, it's the same. I have isolated it to the
> monitor, turning it off, eliminates the noise so it's not the
> computer. Turning monitor off is not a option as I want to use it for
> logging. Rigs are grounded good to a earth ground. Any suggestions,
> short of buying different monitor? By the way it's not a cheap
> monitor, 400 dollar range 17". Suggestions please?

I replaced my CRT monitor witht a flat panel display Viewsonic 1520)-
sharper and absolutely RFI quiet.

Dale W4OP

483. Re: Ham/electronics "show"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <860eh9$d7u$1@bgtnsc01.worldnet.att.net>
Source record: 64086

No luck for me. After clicking on play now-
"Requested URL is not available."
Al

wd5gnr@my-deja.com wrote in message <85tr3l$ah5$1@nnrp1.deja.com>...
>If you have RealAudio, have a look at:
>http://www.givemetalk.com/default.asp?
>ASPName=displaySeries.asp&ArgName=SeriesID&ArgVal=372
>
>73
>
>WD5GNR
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

484. Re: LOW PASS filters -who makes them and who has schematics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-17 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <860euu$es2$1@bgtnsc01.worldnet.att.net>
Source record: 64087
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

I have a neighbor (a fellow ham friend) 2 houses away that has problems with my 40 meter CW transmissions. Three times he has had the cable company come over to is house to "fix" his problem. He also
mentions that one of the cable station's audio is at the same frequency as the air distress band.
Al

Gary Coffman wrote in message ...
>On Sun, 16 Jan 2000 16:56:52 -0500, Curtis Scholl <cscholl@izzy.net> wrote:
>> Would a LOW PASS filter that would allow nothing above 30 MHz to
>>pass be sufficient or would anyone suggest moving the ground wires
>>around?
>
>I'm doubtful that a low pass filter on your transmitter will do any good.
>This sounds like typical fundamental overload to me. If you were radiating
>harmonics, they would show up on specific frequencies, and would move
>as you tuned to different frequencies. That doesn't sound like what's
>happening. The fact that the over the air TV is unaffected reinforces
>this conclusion.
>
>You're just coupling enough amateur frequency signal into her cable box
>to cause this symptom. What you need to figure out now is how it is
>getting in, and how to stop it. (Actually, it isn't legally your problem. It
>is the cable company and your neighbor's problem. But trying to be
>helpful in solving the problem is a good neighbor policy.)
>
>The signal could be getting into the cable box either via common mode
>on the cable or via the power line. Since the problem didn't exist when
>you were running a horizontal antenna, but does now that you're running
>a vertical, you need to look around and see how the relationship between
>your antenna patterns and the cable and power lines have changed. It
>is likely that you now have a current loop paralleling one or the other
>now when you didn't before.
>
>Unless you want to change your antenna system again, you can try
>ferrite filters on the power cord and cable at the offending cable box.
>(Providing the neighbor will let you do that.) There's no filter you can
>add to your transmitter which will help.
>
>Gary
>Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
>534 Shannon Way | We break it |
>Lawrenceville, GA | Guaranteed |

485. Re: WTD: circuit: bench PS 2-25v, 2amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Andy Lake <andy.lake@btinternet.com>
Message-ID: <38846C4C.D5C40C61@btinternet.com>
Source record: 63944
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur,sci.electronics.basics

Larry Gagnon wrote:
>
> anyone have a good, relatively simple circuit for a quality bench
> power supply with adjustable voltage and current...about 2-30V and up
> to 2 or 3 amps??
>
> I have the ARRL 1997 handbook circuit but it seems to me to be more
> complicated than is really necessary. I'm thinking of something built
> around the LM723....

...or try the L200 voltage regulator, available as a small PCB
kit from Maplin, 36V/2A output, internally protected, easily
programmable current limit, etc..

73
Andy.

> Larry MW0AWC

486. Re: FT-243 crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: WB3KUM <d.breeden@nospam.wcom.com>
Message-ID: <38846DFC.BB62BEF6@nospam.wcom.com>
Source record: 63945

Unfortunately the owner of CW Crystals I believe has died and his
associated has closed the business.

487. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <8622dgapd1@nnrp1.deja.com>
Source record: 63946
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

In article <38837bbc.2999412@news.u-net.com>,
gagnon@gagnon.fakeu-net.com (Larry Gagnon) wrote:

[snip]

> 2) the R8 voltage adjust potentiometer: any way of determining what
> its value should be?

NatSemi and others list the Vadj pot at 5K. This has always worked
for me, and higher values have worked but only with the 0 - 5K range
effective. If you have a well-stocked junk box, you might consider
using a 10-turn pot (up to 50K would give you at least one turn range)
or experimenting with swapping the legs on both audio taper and linear
taper pots to give the most control in your voltage range of choice.

And there is no reason whatsoever that prevents you from building
several variable supplies in the same box using the same transformer
as long as you consider what your total load is likely to be, and size
the transformer accordingly. I've been lucky enough to always have
big iron handy...

Jim N6OTQ

Sent via Deja.com http://www.deja.com/
Before you buy.

488. Re: mobile verticle ant question (opinions?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <388483FE.3BC33686@concentric.net>
Source record: 63947

I've noticed the forward-tilt of the Trucker CB'ers for some time, and have thought that it might have been so the antenna(s) would tilt toward vertical under highway speeds. Getting the antennas spaced a bit further from the "box" may well improve performance toward the REAR, which has always been weak for truckers compared to range toward the front of the vehicle.
Heh. Antennas have always been something that don't always "obey the rules"... if it works, fine.
Jim W5AOX

gudmundur wrote:

> Have you seen the 'fad' of truckers tilting their 1/4 verticles
> forward at a 45 degree angle? As a broadcast engineer of over 13
> years experience I thought this was the dumbest thing I ever saw.
> Well, guess what? I drive truck now (and make far more money BTW)
> and I tried the 'tilt' thing. It actually works!! Why??? I am
> thinking that it gets the high impedance end of the ant away from
> the trailer. It should work far worse in this tilted mode, but it
> works no less than 1/2 'S' unit better in most cases, and seems to
> enhance my range by perhaps 1 mile minimum. So, what goes??
> 73 Gummi.

489. Re: searching a CPU for a Yaesu 757GX (first serie)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Dave <arcom@laker.net>
Message-ID: <388490f6_1@news2.starnetinc.com>
Source record: 63948

Yaesu had them the last time I checked about a year ago but the price was
something like $140.
This maybe more than you want to spend or they may not have any left.
The only other thing you can do is find a parts radio. Good luck.

Dave

Renato <renato@numerica.it> wrote in message
news:85vbi5$1l6$3@fe1.cs.interbusiness.it...
> Hi!
> I am searching a CPU for a Yaesu 757GX (first serie).
> I think that it is the same of Sommerkamp 757GH
> Can you help me? Have you it? Do you Know where can i buy it?
>
> Thanks for all the info!
> Note that my e-mail address is modified and the right is
> renato.favero@
> and the same provider!!!
>
> 73 de Renato ik2wys
>
>
>
>
>

490. help w/duplexer specs plz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <3884AA46.257A@mad.scientist.com>
Source record: 63949
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

anyone know where i can find the specs on a duplexer model no.

tdn-7407a

thanks for your time
--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

491. Re: Calculate transistor amplifier input impedance?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3884B98A.1D618F2D@agilent.com>
Source record: 63950

J M Noeding wrote:
>
> On 16 Jan 2000 06:24:35 GMT, k7itm@aol.com.nospam (K7ITM) wrote:
>
> >Jan-Martin asks:
> >
> >>how is input impedance calculated for an inverting amplifier with
> >>shunt feedback?
> >>
> >>Wish to use an amplifier consisting of 2x 2N2222 (BC238), the first is
> >>common emitter stage, with 100 ohm emitter resistor (no decoupling)
> >>and 4700 ohm collector load, the second stage is emitter follower and
> >>the feedback is 1/5.7 (47k from last emitter to first base, and 10k to
> >>ground)
> >
> >One way to think about this: if you force the input 1 millivolt higher, what
> >change in current happens at the input? For your case, the first stage gain
> >must be pretty close to -4700/100 = -47. Assume the emitter follower stage has
> >unity gain, so with a 1 millivolt input change, the output drops by 47
> >millivolts. The voltage divider to the base makes that look like 47mV/5.7 =
> >8.25 millivolts, at a source impedance of 10k in parallel with 47k which
> >happens to be 8.25k in this case...that's just a coincidence. So the input
> >current changed by 1.0 microamps for a 1.0 millivolt change, and that's
> >1.0kohms. For completeness, you must also factor in the input stage base input
> >resistance, which must be about 100 ohms times the transistor beta, or maybe 10
> >to 20 kohms. So the net input impedance must be a bit below 1kohms.
> >
> >
> >
> >Cheers,
> >Tom
> >
> many thanks, and gain is 5.7 when the amplifier is fed from high
> impedance (without taking in account the loss one has), and has higher
> gain the lower the generator's impedance is? Gain limit is somewhat
> lower than 47.
>
> Is it a similar way to calculate the output impedance? Output voltage
> is 6V over 2200 ohm. I would say that output impedance without the
> feedback is (4700+rb)/hfe. hfe for BC238 is at least 200, and rb is
> supposed to be 1k, so I believe it is 27 ohm - without feedback.

Hi Jan-Martin,

OK, yes, the gain would be somewhat less than 47 with zero impedance source. I should have said that the effective emitter resistance is 100 ohms plus about 26mV/i, where i is the emitter DC current, so if it's 1mA, that makes the open loop gain more like 4700/126. And of course, the emitter follower doesn't have perfectly unity gain, either, and will reflect a load back to the first stage collector, too, all of which lowers the gain further. It all depends how accurate you need to get! (Op amps, with high open loop gain, reasonably low output resistance, and high input resistance, make things very easy to calculate, usually.)

The output impedance will be reduced by the feedback loop gain. In figuring that, you must figure a voltage divider of 47k feeding into (10k in parallel with your source resistance). So if the source resistance of the input signal is zero, then there is no reduction because of feedback--you have shorted out the feedback with the zero-impedance source. But if the source resistance is, say, 10k, then the feedback ratio is 5k/(47k+5k) = 0.096. (5k = source impedance in parallel with the circuit's 10k.) The feedback loop gain is that, multiplied by the open loop voltage gain, say 45, for a total loop gain = 4.3. Output impedance will be about the open loop output impedance divided by the loop gain plus 1, so about 27 ohms/5.3 or about 5 ohms. Of course, as you note the hfe is an "about" number, so don't expect the output impedance to be super well defined.

Also, not to be forgotten: negative feedback applied as a voltage effectively in series with the input raises the input impedance; applied effectively as a current lowers the input impedance. Negative feedback derived from the output voltage lowers the output impedance; negative feedback derived from the output current raises the output impedance.

Cheers,
Tom

492. Re: LM317 power supply query - lm317ps.gif (1/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3884BA36.A2AF5E8A@agilent.com>
Source record: 63951
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Looks like an image copied from the National Semiconductor LM317 data sheet. So...what's the query? I didn't see any text associated with the .gif.

Cheers,
Tom

Larry Gagnon wrote:
>
> [Image]

493. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3884BD37.CDC832AE@agilent.com>
Source record: 63952
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Larry Gagnon wrote:
>
> Attached is the National semiconductor circuit suggestion for a
> 1.5-30V constant current/constant voltage power supply. I like the
> circuit as a possible workbenchbench power supply. Two queries
> however: 1) the LM301A op amp shows 6 volt input plus Vcc. I asume the
> Vcc is 15volt, why the difference, shouldn't it be -15 volt and not 6v
> as shown?

I guess you posted the .gif in another message... The .gif you posted isn't the same as in my National data book, nor quite the same as in the data sheet I downloaded a few days ago. The "6V" should be "-6V" (with respect to ground). If you made it -15, you'd exceed the power supply rating of the op amp, at high outputs. You didn't ask where pin 7 goes...one of my schematics shows it going to the output voltage, though that then assumes an op amp with input common mode range that goes all the way to the + supply and even slightly beyond, which I don't think the LM301A will do! There are some modern op amps that can do it. Power supply for the op amp is a bit of a problem if you want really wide range. You _could_ use a BB OPA604, which can take 44V or so total supply. I'd go with some pre-regulation, like +32V and -6, with an OPA604...

>
> 2) the R8 voltage adjust potentiometer: any way of determining what
> its value should be?

As someone else posted, 5k should work well for you.

Cheers,
Tom

494. PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: "colinlowe@jet" <colinlowe@jet.es>
Message-ID: <862qj5$de4$1@lola.ctv.es>
Source record: 63953

I am looking for any Amateur radio related projects using the PIC16F84.

I've just starting out playing the PIC's and wondered what projects I could
build.
If you have a homepage with the project detailed, please send me the URL.

73 de Colin
EB/G1IVG
Barcelona Spain
http://personales.jet.es/colinlowe/index.htm

495. Ebay item. Tube related

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: yodabean1@yahoo.com.nospamplease
Message-ID: <dj1a8s4luspj4tp06in1e2gs4ha183129r@4ax.com>
Source record: 63954
Cross-posted to: rec.radio.amateur,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.shortwave,rec.radio.swap

Hi;

Repair shops / tube audio gurus / radio buffs take a look!

One lot of tube shields for the 9 pin miniature tubes (12ax7,
12au7...etc) these are the twist-lock spring-loaded type used in
radio and tube audio gear.

There are over 300 in the lot.

Stock up now!

Don't miss out on this one! Only 22 hours left to bid!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=236415863

496. Re: Single-Crystal QRP Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: "Cestyll O. Dywod, esq." <willi6@erols.com>
Message-ID: <38851D3C.C3D76987@erols.com>
Source record: 63955
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Try a search on Pixie-2 or variations on that theme. I believe several companies produce a small XCVR as you have described and "Pixie-2" is one of the more common.

73, Dave

K7HMP

lagniappe wrote:

> Looking for a kit, or fairly detailed plans, for a QRP
> CW transceiver that uses the same crystal for both transmit
> and receive. The scheme could be some sort of built-in
> "pulling" capacitance to shift freq by a KHz or so on
> synchronous receive, or some other design. Looking for
> a very simple, small, low-power circuit.
>
> thanks,
>
> Martin
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

497. Re: 4X1000 & 4X1500????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: AL GOSS <renal@localnet.com>
Message-ID: <388522FD.9CF5E891@localnet.com>
Source record: 63956

I expect they are 4CX of each kind 1000A and 1500B both 1500 watt
output tetrodes twist lock socket several times larger than x150
or x250 AL

498. power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: jeixray@aol.com
Message-ID: <20000117223332.01207.00000978@ng-fo1.aol.com>
Source record: 64088

The national LM 350 is a regulator chip that will produce 3 amps when mounted on a heat sink. Output voltage is 1.5 - 35 volts. If you can find in the handbook a circuit for the LM 317, just follow that but substitute the 350. If you can get the national power supply handbook you will find all of that information. I am using this regulator in my "bench supply". I use it for everything. Impossible to see hum or noise on my tektronix 465 scope.

good luck
Jim
WA2NJV

499. viking valiant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: jeixray@aol.com
Message-ID: <20000117223927.01207.00000983@ng-fo1.aol.com>
Source record: 64089

I have a valiant in perfect working order but modified for better audio, and greater vfo stability. I do not have the ssb adaptor. I was using it on 80 AM. I have the complete manual along with all mods that were put into the rig. It is in working condition. I gave it up because I got a Johnson 500. if you are interested please contact me. I live in New Jersey, maybe you want to see it.

Jim WA2NJV

500. Re: CW QRP KIT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: mojaveplan@aol.com
Message-ID: <20000117233327.17712.00000925@ng-ck1.aol.com>
Source record: 64090

>From: gagnon@gagnon.fakeu-net.com (Larry Gagnon)
>Date: Tue, Jan 4, 2000 15:09 EST
>Message-id: <3870cfa2.5491757@news.u-net.com>
>
>On Mon, 3 Jan 2000 10:53:43 -0000, "CU2IJ" <rdd87728@mail.telepac.pt>
>wrote:
>
>>Hello,
>>
>>I am looking for a CW QRP transceiver KIT.
>
>I would recommend the Wilderness Sierra QRP CW transceiver. I built it
>last year and it is terrific. Great fun to build, good instructions,
>easy to tune up. You have many options available and plug-in band
>modules for every band. You can buy just one and keep your costs down.
>The transceiver is very sensitive, great receiver, incredibly good
>break-in CW, very light and best of all it only consumes 35mA on
>receive. About 2.0-3.5 watts output, depending on input voltage and
>the way you wind the toroids. There is a digital readout, memory keyer
>and digital wattmeter module option that makes it a very high tech QRP
>rig!
I am interested in building the Sierra.
Have you, Larry, or anyone else that built this rig notice any phase noise or
birdies of any sort in the rx? thanks for the info. 73.
jeff, n7aiz

501. FA Heathkit Mohawk

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: John L <larry.asp@sympatico.ca>
Message-ID: <3883F177.7E52063F@sympatico.ca>
Source record: 64091
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Nice Heathkit Mowhawk on Ebay:

<http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=240318440>

502. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: Roma <roma60@home.com>
Message-ID: <38842A62.B45E6C2F@home.com>
Source record: 64092
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Where is the attachment?

Larry Gagnon wrote:
>
> Attached is the National semiconductor circuit suggestion for a
> 1.5-30V constant current/constant voltage power supply. I like the
> circuit as a possible workbenchbench power supply. Two queries
> however: 1) the LM301A op amp shows 6 volt input plus Vcc. I asume the
> Vcc is 15volt, why the difference, shouldn't it be -15 volt and not 6v
> as shown?
>
> 2) the R8 voltage adjust potentiometer: any way of determining what
> its value should be?
>
> Your help would be appreciated

503. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-18 00:00:00 UTC
From: kd8gt <bubba@somewhere.com>
Message-ID: <4fa88so6pjv6eu6fncr1hjmeqgrats8h8i@4ax.com>
Source record: 64093

On Mon, 17 Jan 2000 16:49:35 -0600, "JC Quinn" <kc4ee@sonet.net>
wrote:

>Check your refresh rate.(start/settings/control
>panel/display/settings/advanced/adapter) If set at 60hz most any monitor
>will trash an HF rig. See if your monitor will support 72 hz refresh and
>try that and see if the noise goes away.
>73
>Jim
Worked great, I never thought of it. Changed to a different refresh
rate and a different color depth and took care of the problem, there's
still some noise, but I can live with it now. Many thanks

504. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: bshort@speedchoice.com
Message-ID: <MPG.12ef2a5432fe11569897fa@news.speedchoice.com>
Source record: 63957

```
> I am looking for any Amateur radio related projects using the PIC16F84.
>
> I've just starting out playing the PIC's and wondered what projects I could
> build.
> If you have a homepage with the project detailed, please send me the URL.
```

Here is my quite simple Morse IDer with SideTone and PTT (in CCS C):

```
//--------------------------------------
// Include Files
//--------------------------------------
#include <16f84.h>

//--------------------------------------
// Processor specific configuration
//--------------------------------------
#use delay(clock=10000000)

#byte PORTA = 5
#byte PORTB = 6

#BIT RA0 = 5.0
#BIT RA1 = 5.1
#BIT RA2 = 5.2
#BIT RA3 = 5.3
#BIT RA4 = 5.4

#BIT RB0 = 6.0
#BIT RB1 = 6.1
#BIT RB2 = 6.2
#BIT RB3 = 6.3
#BIT RB4 = 6.4
#BIT RB5 = 6.5
#BIT RB6 = 6.6
#BIT RB7 = 6.7

#BIT PTT = 6.1
#BIT SIDE_TONE = 6.2
#BIT CW = 6.3
#BIT CW1 = 6.4

#define DIT_TIME (50)
#define DAH_TIME (DIT_TIME*3)
#define SPACE_TIME (DIT_TIME*7)

#define ON (1)
#define OFF (0)
```

```
short KEY;

void dah()
{ KEY = ON;
DELAY_MS( DAH_TIME );
KEY = OFF;
DELAY_MS( DIT_TIME );
}

void dit()
{
KEY = ON;
DELAY_MS( DIT_TIME );
KEY = OFF;
DELAY_MS( DIT_TIME );
}

void space()
{ KEY = OFF;
DELAY_MS( DAH_TIME );
}

void word_space()
{
KEY = OFF;
DELAY_MS( SPACE_TIME );
}

void identify()
{

PTT = ON;
space();

dah(); dit(); dit();
space();
dit();

word_space();

dah(); dit(); dah();
space();
dah(); dah(); dit(); dit(); dit();
space();
dah(); dah(); dah();
space();
dah(); dit();

word_space();
PTT = OFF;
}
short TONE;

#INT_RTCC
rtcc_handler()
```

```
{
CW = KEY;
CW1 = !KEY;
if ( KEY == ON )
{
TONE = !TONE;
}
else
{
TONE = OFF;
}
SIDE_TONE = TONE;
}

void main()
{ set_tris_b( 0xc1 ); // keep RB6/RB7 as inputs

space();

SET_TIMER0( 0x00 );
SETUP_COUNTERS( RTCC_INTERNAL, RTCC_DIV_8 );
ENABLE_INTERRUPTS( INT_RTCC );
ENABLE_INTERRUPTS( GLOBAL );

for(;;)
{
if ( RB0 != ON )
{
identify();
}
}
}
```

--
k7on@arrl.net >or< http://www.qsl.net/k7on/
--

505. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: maddog@io.com
Message-ID: <388541bd.568621@news.io.com>
Source record: 63958

On Mon, 17 Jan 2000 16:49:35 -0600, "JC Quinn" <kc4ee@sonet.net>
wrote:

>[snip] If set at 60hz most any monitor
>will trash an HF rig. See if your monitor will support 72 hz refresh and
>try that and see if the noise goes away.

And why, pray-tell, would that be? Would the same monitor at 72 Hz
not have harmonics?

506. Re: 4X1000 & 4X1500????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <7weh4.6109$3b6.31229@ozemail.com.au>
Source record: 63959

the 4cx1500b having superb 3rd order IMD, thats if you care about putting
out a clean signal rather than worrying about 50 watts extra. Typically this
tube has -44db third order IMD, which is superb.

AL GOSS <renal@localnet.com> wrote in message
news:388522FD.9CF5E891@localnet.com...
> I expect they are 4CX of each kind 1000A and 1500B both 1500 watt
> output tetrodes twist lock socket several times larger than x150
> or x250 AL
>

507. Re: Ham/electronics "show"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: wd5gnr@my-deja.com
Message-ID: <864dv0$28t$1@nnrp1.deja.com>
Source record: 63960

It should work. There are three articles now. Perhaps try this shorter
URL: http://www.al-williams.com/workshop

73,

WD5GNR

In article <860eh9$d7u$1@bgtnsc01.worldnet.att.net>,
"Al, N2NKB" <n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:
> No luck for me. After clicking on play now-
> "Requested URL is not available."
> Al
>
> wd5gnr@my-deja.com wrote in message <85tr3l$ah5$1@nnrp1.deja.com>...
> >If you have RealAudio, have a look at:
> >http://www.givemetalk.com/default.asp?
> >ASPName=displaySeries.asp&ArgName=SeriesID&ArgVal=372
> >
> >73
> >
> >WD5GNR
> >
> >
> >Sent via Deja.com http://www.deja.com/
> >Before you buy.
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

508. Variac schematic symbol

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Marty <martyk@naples.infi.net>
Message-ID: <3885B371.4CFD38F@naples.infi.net>
Source record: 63961

I'm looking for a symbol for a Variac (or Powerstat) that I can use in a

circuit schematic. If anyone has one they could scan for me, or knows

of a URL where I might find one to download, I'd appreciate it very
much.

I'm looking for the kind that shows the winding as a toroid, not the
straight autotransformer configuration.

TIA, Marty

509. Phasing Helix antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Ash <ash@telia.com>
Message-ID: <3885D8E5.552E755D@telia.com>
Source record: 63962
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hi,
I'm just wondering exactly how to phase 2 and possibly 4
Helix (helical) antennas properly, there's not much info about this out
on the net.
Thanx

//Ash

510. Re: Phasing Helix antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <864lqa$p8c$1@plutonium.btinternet.com>
Source record: 63963
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

What frequencies and in what mode are the antennas operating. Makes a world of difference.

511. Want B&W 3018 and B&W 3027 coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Doug Snowden <dsnowden@ncdc.noaa.gov>
Message-ID: <3885DEB8.B46F23D1@ncdc.noaa.gov>
Source record: 63964

Homebrew project. Need B&W 3018 2"or more long
B&W 3027 7" or more long

Doug, N4IJ
dsnowden@ncdc.noaa.gov
Asheville, NC

512. WTB: TS-530S Original Service Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: RSherry@metricom.com
Message-ID: <3885e697.76023465@news.metricom.com>
Source record: 63965

Need an original TS-530S Service Manual (not the operating manual).
Thank you, Russ, WA2GWV

513. FS: Tubes, Books & misc. stuff, very low prices

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <864ran$vc0$1@newssvr04-int.news.prodigy.com>
Source record: 63966
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

e-mail m.pasternack@prodigy.net for 10 page list. Murray, W6KRC

514. Pse hlp for TS-140S error

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <3885f10d@news.marun.edu.tr>
Source record: 63967

Dear om
if you can help me I`ll be happy :)

I have a Transceiver (Kenwood TS-140S)
But it is not work now

SYMPTOMS :

First time : good receive but audible alarm " UNLOCK "
with morse code time to time .

Now : - open display firs time (forexample 14.000.00)
- after opened display (like . . . . .)
- not receive also not any sound or hiss
- not transmit
- alarm " UNLOCK " with morse code repeatly .
- when I rotate Tuning knob display is open
like 14.230.00 but again . . . . . .after 1 second.

I measured 3.2V on back-up lithium battery .

TA2AD Sua TORTU TURKEY

515. Hall-effect sensors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <864tdj$jbv@unix1.cc.ksu.edu>
Source record: 63968

The current Radio Shack catalog lists 10-15 Hall-effect sensors, but my
local store doesn't carry any in stock, and I don't know enough about
Hall-effect sensors to know what to order.

What I'd like to do is make a "radiation sensor" which senses "radiation"
simulated by a magnetic field, for use in hazmat drills. I'd like to be
able to scatter "sand" mixed with some tiny bits of magnets and then have
trainees detect the "bad stuff" as if they were using a radiation monitor.

Assuming a Hall-effect sensor acts either as
* a variable voltage source,
* a variable current source, or
* a variable resistor,
I should be able to convert the output to something which would
register on an analog meter or DVM or ....

Does anyone know enough about the kinds of Hall-effect sensors that
Radio Shack (or anyone else) sells to suggest which I might use?

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (Professor Emeritus) "Barbershop" tenor. CDL(PTX) W0PBV (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

516. QRP Kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Jarek Misiak <jmis@po.opole.pl>
Message-ID: <j3nh4.41247$X3.857471@news.tpnet.pl>
Source record: 63969

Hello
I am looking for any qrp kits dealers in Europe and USA ?? I wont to
made simple qrp rig and use it next summer holiday from my 2nd QTH.

73! Jarek sp6ojk

517. Need articles from May and June 1997 QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <8658t4$nh7$1@nnrp1.deja.com>
Source record: 63970

There were two articles on high-power Class E amps in the May and June 1997 QST. Can somebody photocopy them for me for reasonable copy costs?

Email a reply please...

Thanks in advance

Jim N6OTQ

Sent via Deja.com http://www.deja.com/
Before you buy.

518. Re: QRP Kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38860F35.B3171AAF@ix.netcom.com>
Source record: 63971

Jarek Misiak wrote:

> Hello
> I am looking for any qrp kits dealers in Europe and USA ?? I wont to
> made simple qrp rig and use it next summer holiday from my 2nd QTH.
>
> 73! Jarek sp6ojk

Hello Jarek -- lots of QRP Kits at URL:
http://www.ac6v.com/pageay.html

--
73 From Rod In San Diego

AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 527,000 visits on the counter
http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

519. Re: Calculate transistor amplifier input impedance?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3884f82b.335589369@news.online.no>
Source record: 63972

tnx to all for valuable information!
I'll keep it, it seemed first that a two stage amplifier with +12V
supply was easy for dead-bug mounting,
but I could need some more gain, and a 741 will solve my needs very
well, so I will use this device (with 12V supply),
it is good for the purpose, to amplify a 1.5kHz tone from selective
voltmeter to drive a voltage doubler and a 40�A meter with sufficient
hold time for good reading on 136kHz morse signals

the problem with the Wandel & Goltermann selective voltmeters I have
studied the circuit diagrams for (quite a lot) have a constant current
source for the rectifier/voltage doubler and have no excess output
voltage to the meter circuit. Because of the hi-z ciircuit feeding the
meter circuit it must have a low time constant to read fast enough

The amplifier is connected to the so-called "IF-out (1.5kHz) for
selective operation", level is 0.2V RMS in 600 ohm, it is amplified to
2.5V with few hundred ohm or less output impedance and fed to a simple
2x1N270 detector, I don't care to use op-amp for this purpose, or
build sample and hold detector (See: G3SEK's "VHF/UHF dx book").

73 Jan-Martin LA8AK

On Tue, 18 Jan 2000 11:05:46 -0800, Tom Bruhns
<tom_bruhns@agilent.com> wrote:

>
>
>J M Noeding wrote:
>>
>> On 16 Jan 2000 06:24:35 GMT, k7itm@aol.com.nospam (K7ITM) wrote:
>>
>> >Jan-Martin asks:
>> >
>> >>how is input impedance calculated for an inverting amplifier with
>> >>shunt feedback?
>> >>
>> >>Wish to use an amplifier consisting of 2x 2N2222 (BC238), the first is
>> >>common emitter stage, with 100 ohm emitter resistor (no decoupling)
>> >>and 4700 ohm collector load, the second stage is emitter follower and
>> >>the feedback is 1/5.7 (47k from last emitter to first base, and 10k to
>> >>ground)
>> >
>> >One way to think about this: if you force the input 1 millivolt higher, what
>> >change in current happens at the input? For your case, the first stage gain

>> >must be pretty close to -4700/100 = -47. Assume the emitter follower stage has
>> >unity gain, so with a 1 millivolt input change, the output drops by 47
>> >millivolts. The voltage divider to the base makes that look like 47mV/5.7 =
>> >8.25 millivolts, at a source impedance of 10k in parallel with 47k which
>> >happens to be 8.25k in this case...that's just a coincidence. So the input
>> >current changed by 1.0 microamps for a 1.0 millivolt change, and that's
>> >1.0kohms. For completeness, you must also factor in the input stage base input
>> >resistance, which must be about 100 ohms times the transistor beta, or maybe 10
>> >to 20 kohms. So the net input impedance must be a bit below 1kohms.
>> >
>> >
>> >
>> >Cheers,
>> >Tom
>> >
>> many thanks, and gain is 5.7 when the amplifier is fed from high
>> impedance (without taking in account the loss one has), and has higher
>> gain the lower the generator's impedance is? Gain limit is somewhat
>> lower than 47.
>>
>> Is it a similar way to calculate the output impedance? Output voltage
>> is 6V over 2200 ohm. I would say that output impedance without the
>> feedback is (4700+rb)/hfe. hfe for BC238 is at least 200, and rb is
>> supposed to be 1k, so I believe it is 27 ohm - without feedback.
>
>Hi Jan-Martin,
>
>OK, yes, the gain would be somewhat less than 47 with zero impedance
>source. I should have said that the effective emitter resistance is 100
>ohms plus about 26mV/i, where i is the emitter DC current, so if it's
>1mA, that makes the open loop gain more like 4700/126. And of course,
>the emitter follower doesn't have perfectly unity gain, either, and will
>reflect a load back to the first stage collector, too, all of which
>lowers the gain further. It all depends how accurate you need to get!
>(Op amps, with high open loop gain, reasonably low output resistance,
>and high input resistance, make things very easy to calculate, usually.)
>
>The output impedance will be reduced by the feedback loop gain. In
>figuring that, you must figure a voltage divider of 47k feeding into
>(10k in parallel with your source resistance). So if the source
>resistance of the input signal is zero, then there is no reduction
>because of feedback--you have shorted out the feedback with the
>zero-impedance source. But if the source resistance is, say, 10k, then
>the feedback ratio is 5k/(47k+5k) = 0.096. (5k = source impedance in
>parallel with the circuit's 10k.) The feedback loop gain is that,
>multiplied by the open loop voltage gain, say 45, for a total loop gain
>= 4.3. Output impedance will be about the open loop output impedance
>divided by the loop gain plus 1, so about 27 ohms/5.3 or about 5 ohms.
>Of course, as you note the hfe is an "about" number, so don't expect the
>output impedance to be super well defined.

>
>Also, not to be forgotten: negative feedback applied as a voltage
>effectively in series with the input raises the input impedance; applied
>effectively as a current lowers the input impedance. Negative feedback
>derived from the output voltage lowers the output impedance; negative
>feedback derived from the output current raises the output impedance.
>
>Cheers,
>Tom

520. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3884fb75.336431699@news.online.no>
Source record: 63973

On Tue, 18 Jan 2000 23:48:10 +0100, "colinlowe@jet" <colinlowe@jet.es>
wrote:

>I am looking for any Amateur radio related projects using the PIC16F84.
>
>I've just starting out playing the PIC's and wondered what projects I could
>build.
>If you have a homepage with the project detailed, please send me the URL.
>
>
>
>73 de Colin
>EB/G1IVG
>Barcelona Spain
>http://personales.jet.es/colinlowe/index.htm
>
>
>
One project LB8X and discussed for some time is an antenna analyzer,
see G3LDO's book, you build a simple circuit and take 5 measures from
simple diodedetectors, calculate for the failure from the different
detectors on different RF voltages, and calculate from a formula
(quite impressive algoritm) to present a result on digital meter or
convert to analog reading, presenting impedance in R+jX or Z<angle

make it portable with remote control to the PC, store the results from
different antenna tuning for later studies

it is also some easier way, using ATMEL AT89/90 series flash
microcontroller, you can program the device using simple basic, and
correct wrong functions
I've just received a starter kit

My interest covers most amateur radio bands from 136kHz to 24GHz

73 Jan-Martin
LA8AK

521. AM tube radio kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: weathrship@aol.com
Message-ID: <20000119154442.03673.00000521@ng-fg1.aol.com>
Source record: 63974

Hello, I still have some 'garage' tube radio kits,

see www.ghostmoon.bigstep.com

Your pal, Tony

522. Re: Hall-effect sensors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "Robert <DC6XS> Eckelmann" <robert.eckelmann@netsurf.de>
Message-ID: <388634E1.64DA936D@netsurf.de>
Source record: 63975

Hello!

Have a look into the RS-Components Catalog, they have also a good
description of their products..

73 de Robert

523. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <948322004.1584697794@news.indigo.ie>
Source record: 63976

On Tue, 18 Jan 2000, colinlowe@jet.es wrote:

>I've just starting out playing the PIC's and wondered what projects I could
>build.
>If you have a homepage with the project detailed, please send me the URL.
>
>73 de Colin
>EB/G1IVG

There is a very simple iambic keyer on my homepage.

http://www.qsl.net/ei9gq/iambic.html

73, Ed. EI9GQ.

--

Remove 'X' to reply by e-mail.

524. Re: Hall-effect sensors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: hrbcrb@aol.com.goaway
Message-ID: <20000119175216.03566.00000334@ng-bg1.aol.com>
Source record: 63977

Hello Myron

I think I understand what you are trying to simulate. All the Hall sensors I have seen are for sensing from sevral hundred to a few thousand Gauss.

What you need is an instrument that has a sensitivity of a few milli-gauss. Magnetometers that sense the Earths magnetic field would be hard pressed to sense a change to the Earths magnetic field by a few metal filings spread around. The earths field varies from aproximately 600 to 800 milli-gauss depending location.

I'm afraid you are going to have to find another method of simulation for your training.

Regards, Hugh KF6HHS
Retired, now life moves at my pace.
please note spam filter

525. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: dm <dmandjos@olypen.com>
Message-ID: <Yprh4.35913$475.929373@news4.giganews.com>
Source record: 63978
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Right you are Steve! I once had a "new" Viking Valiant transmitter that exhibitted the "downward modulation" phenonenon so prevelant in those days. I had an old power supply laying around and re-wired the Valiant to use THAT old supply for the Modulators. VIOLA! No more downward movement of the P.A. plate current! I guess the Valiant supply was just not "herky" enough to keep stable supply voltage to those three 6146's when the Modulator's also were dragging power off, at a voice rate. But I loved that old rig, and if I had it today, I'd work 10 meter AM, just to watch the Mercury Vapors flash!
VY 73, "DM"

526. Re: QRP Kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38861f37.3391548@news.online.no>
Source record: 63979

On Wed, 19 Jan 2000 18:07:11 GMT, "Jarek Misiak" <jmis@po.opole.pl>
wrote:

>Hello
> I am looking for any qrp kits dealers in Europe and USA ?? I wont to
>made simple qrp rig and use it next summer holiday from my 2nd QTH.
>
>73! Jarek sp6ojk
>
>
you needen't jump over the river to find water .....could try this kit
using inexpensive components, telephone number to SM6DJH is
+46-523-30015

In SM-QTC nr 12/99 and possibly nr 1/00 SM6DJH describes a rather
interesting high performance single band CW transceiver with ladder
type 5MHz xtal filter.
He underline the importance of using readily available components, the
transistor types have been available for almost 40 years and may still
be available in one or another version for many years to come, such it
is not possible to say about integrated circuits.
Semiconductors are BF199, BD135 (or BD137, BD139), BC547B (TUN) BF245B
and BC557B (TUP). The receiver even has AGC, some of it is on another
IF =1MHz using a 6MHz ceramic element in the oscillator. Only few
coils in RX and TX must be wound, in large extent is used fixed value
coils with values like 0 33, 1 H, 2 2, 10 H etc, it is therefore
easier to tune it up without too much complications.

RF output is 5W on 80m, 4W on 40m and 1.7 on 20m but using BFW16A or
2N4427 as driver stage the output may be increased to 3.2W

no email address is mentioned, only phone number

73 jan-martin LA8AK

527. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000119182849.03558.00000264@ng-cc1.aol.com>
Source record: 63980

19 January 2000

Below is a summary of the threats to harm made by Rick Littlefield. Those who have expressed an interest can now see them directly and in context of time and subject.

I am grateful for the help from others in getting Mr. Littlefield to diffuse his focus on my harm.

Nathan 'Chip' Cohen
N1IR

The following is a summary of the threats to harm Dr. Nathan Cohen by Frederick Littlefield.

Pointing out the threats publicly has appeared to have had a positive effect, in that it has made Mr. Littlefield aware of the severity of his statements, although he is strongly in denial.

Dr. Cohen has decided to go to local and federal law enforcement should Mr. Littlefield make any more statements threatening him. He has also publicly suggested, although Mr. Littlefield has not complied, that Dr. Cohen and Mr. Littlefield have no interaction whatsoever, including responses to posts made by the other. This summary, when posted on USENET, is the last one made regarding Mr. Littlefield on USENET by Dr. Cohen.

SUMMARY OF THREATENING COMMENTS

In allusions to Nathan Cohen, Frederick Littlefield made the following statements: Both come from dialogue publicly posted on USENET between Thomas Rauch and Frederick Littlefield. Both are radio amateurs with callsigns W8JI and K1BQT respectively.

****
Re: Goodbye AOL
15 Jan 2000

< Can K1BQT help?>

"Yes I can, Tom. I know an established North End family with a unique approach for resolving libel claims for out-of-town clients. It's not cheap, but it's faster than the courtsâ€¦"

73

Rick K1BQT

****

AND

****
RE: CFA (Cross Field Antenna)
15 Jan 2000

<What do you think?>

If Gypsy Rose Lee turned an indecent occupation into a glamorous art form, Chip has surely done the opposite for antenna design. Could CFA mean "Chip's Final Act?â€¦"

Rick K1BQT

****

Both statements -made the same day--clearly refer to efforts to harm Nathan Cohen. The first refers to a "family" living in a section of Boston with historical links to organized crime; this "family" "resolves" libel claims outside of the court system, for a hefty price. This is a threat against Dr. Cohen designed to prevent him from pursuing legal action for stopping long-term harassment by Thomas Rauch against Dr. Cohen.

The second statement clearly refers to a "final act". Dr. Cohen is a scientist with 33 years of antenna building who is one of the prominent researchers in the field.of antenna design. Mr. Littlefield is stating that there is a "final act" to an ongoing profession for Dr. Cohen. Dr. Cohen has never given any indication that his work in this field is anything but ongoing. Thus we are asked to contemplate a means by which Dr. Cohen is terminated

It is important to note that motivation for such is presented by Mr. Littlefield. He asserts that Dr. Cohen is responsible for the destruction of an occupational field of endeavor, for which Dr. Cohen is well known to the public, into an "indecent occupation".

On 18 January, in another public USENET post between the two, Frederick Littlefield again refers to the 'North End ' reference to Thomas Rauch, confirming the that the intent is to harm Dr. Cohen, in an allusion to the breaking of knees by a "North-End family". Notice the change in wording from "family" to the single "surgeon"-a perversion of the harming of people by breaking their knees-- after Dr. Cohen expressed public fear of harmful intent by Mr. Littlefield:

****
Re: Death Threats
18 Jan 2000

On the 15thâ€¦ I see that I offered to put YOU [Thomas Rauch] in touch with the services of a fictitious North-End Boston knee surgeon to help YOU resolve YOUR libel problemâ€¦.

Rick K1BQT

****
No info is proffered as to why a surgeon from a "North-End family" would be in any way involved in resolving a libel case. The suggestion is now presented that Dr. Cohen can be harmed by having his knees broken, thus indicative of harmful intent.

528. Identifying Belden cable help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38865AE0.38B0B169@mindspring.com>
Source record: 63981
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I have come by a large length of what appears to be Belden 2668 cable. I can't find that cable type in any of my catalogs or in the Belden on-line catalog. What I have appears little used, with gray PVC covering, about 0.5" in diameter, is terminated on both ends with 37-pin Centronics-type male connectors, and is marked thus: "Belden AWM STYLE 2668." Can anyone tell me what this cable is used for, and how much it costs (I probably want to sell it to someone who can use it)? The cable also has an inspection tag from what appears to be a vendor (Kertech in MA) that refers to "Part # LC37(7S)PP." Thanks.

Will
KD7BFX

529. Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: ghopper@eskimo.com
Message-ID: <ghopper-1901001809380001@05-043.009.popsite.net>
Source record: 63982
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I have several lengths of coax (some RG-58, belden 8237, and RG 213) that have had uncertian histories. At least one of the lengths has spent several days under water (fresh and salt) however all of them are clean so visual inspection has not been conclusive. I'd like to find the bad ones since several of the lengths are reported to be fine and they are from 25 feet to almost 100 feet long.

I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and HF and vhf rigs but nothing like a signal generator.

Any advice on this topic would be appreciated, even if it's just a reference to an article in QST or other publication.

Thanks.

Grant Hopper
KB7WSD

--
G.F. Hopper
KB7WSD

"Remember, you can always quit before it gets really bad."
-

530. WTB UHF MITREK parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "Dennis A. Homerick" <w8nw@richnet.net>
Message-ID: <3886707B.4B983278@richnet.net>
Source record: 63983

Thanks for reading this message. I have a 75w UHF Mitrek with a blowen

final transistor. Need a replacement!!! Also need a 71.9 decorder reed

(kln-6209a) for same radio.

thanks
Dennis, w8nw

531. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "Michael St. Angelo" <mstangelo@worldnet.att.net>
Message-ID: <865un5lsd1@bgtnsc03.worldnet.att.net>
Source record: 63984
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Grant,

If you terminate them with the appropriate coaxial connectors,
you can find the loss with your rig, wattmeter and dummy load.

Here is the procedure. Assume you have the proper Bird slugs
for your VHF radio.

1. Connect the VHF radio to your wattmeter and dummy load
with good, short pieces of coax. Record the power and check the
SWR; is should be close to 1:1.

2. Connect a piece of test coax between the radio and
wattmeter. Record the power, it shouild be lower.
Verify the SWR is still close to 1:1.

3. The loss in the coax is the power reading in step 1
minus the power reading in step 2.

4. Attenuation in db is db = 10 log x power in step 2/power in step 1

5. The attenuation of new coax in db per 100feet is given in the ARRL
Antenna handbook or in a Belden catolog or webpage.
According the the ARRL Antenna book, the loss
RG58 at 30 MHz is approx. 2.4 db per 100 ft
and at 148 Mhz is approx 6 db per 100 ft.

Compare your attenuation per 100 feet to the specs. Good coax should
be close to the specs.

Hope this helps.

Mike St. Angelo N2MS

Grant Hopper <ghopper@eskimo.com> wrote in message
news:ghopper-190100180938000l@05-043.009.popsite.net...
> I have several lengths of coax (some RG-58, belden 8237, and RG 213) that
> have had uncertian histories. At least one of the lengths has spent
> several days under water (fresh and salt) however all of them are clean so
> visual inspection has not been conclusive. I'd like to find the bad ones
> since several of the lengths are reported to be fine and they are from 25
> feet to almost 100 feet long.
>
> I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and
> HF and vhf rigs but nothing like a signal generator.
>
> Any advice on this topic would be appreciated, even if it's just a

> reference to an article in QST or other publication.
>
> Thanks.
>
> Grant Hopper
> KB7WSD
>
> --
> G.F. Hopper
> KB7WSD
>
> "Remember, you can always quit before it gets really bad."
> -

532. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <86618nlni1@bgtnsc02.worldnet.att.net>
Source record: 63985

MC 10kW Jesus,
I stand corrected. The original poster sent me a private email, and his perception was that you were not trashing him, and you were drawing attention to what you described below. I interpreted it totally wrong. Please accept my apology, and thanks for responding because I wanted
to clear this up. And thanks for your contributions.
Al

MC 10kW Jesus wrote in message <3886644D.ABC2B96E@hotmail.com>...
>There was no offense intended with my -duh- statement. Quite the opposite in
>fact as I was drawing attention to the fact that I was stating something that
>was patently obvious. I try not to use my backspace key and just kept on
>truckin'! If you check my history of postings I think you'll find that I am
>anything but a trasher of ideas.
>
>MC
>
>"Al, N2NKB" wrote:
>
>> The poster was interested in cross needles, not separate movements.
>> Why did you trash him with your (duh) statement and discourage him?
>> I wish Randall luck with his homebrew activities.
>> Al
>>
>> MC 10kW Jesus wrote in message <387BD3F1.B7DC4B81@hotmail.com>...
>> >It is two meters together. (duh) If you're on a homebrew kick, just get two
>> >surplus meters that are the same and fabricate your own scale. Better yet,
>> >make it an active meter and design a circuit to calculate the VSWR and
>> >display this on one meter.
>> >
>> >MC.
>> >
>> >
>> >
>> >"Randall D. DuCharme" wrote:
>> >
>> >> Greetings,
>> >>
>> >> For one of my first ham projects I'm going to build an antenna tuner.
>> >> Does anyone know of a source for those cross needle meters like MFJ and
>> >> others use? I really like the way they look.
>> >>
>> >> Thanks
>> >>

>> >> NOTE: To reply directly to me, please remove NO-SPAM from my email
>> >> address.
>> >> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
>> >> received as a result of posting to these newsgroups, I find no other
>> >> easy
>> >> solution.
>> >> --
>> >> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>> >>
>> >> Unsolicited commercial email (SPAM) received at this email address
>> >> will not be tolerated. All spam is subject to a $200 per incident
>> >> processing fee and possible legal action pursuant to federal
>> >> regulations.
>> >
>

533. Re: Identifying Belden cable help needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Bill Gallagher <KS3Y@prodigy.net>
Message-ID: <8661et$becm$1@newssvr03-int.news.prodigy.com>
Source record: 63986
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Sounds like the stuff that we used to use for the LV controllers for stage lighting. The control console and the dimmer packs were set up with 27, 37,or 53 pin QC's, and the trusses where already pre-wired. all you had to do was get 220 to the trusses, and then daisy-chain the controller cables from the stage box to the trusses. A larger version of the control 'snake' was routed along with the audio snakes to front-of-house where it was QC'd to the lighting control console.

the small chunk I have here is silver-colored jacket with 34 pairs of 26-gauge solid core.

Bill WA3RA

Will White <kd7bfx@mindspring.com> wrote in message news:38865AE0.38B0B169@mindspring.com...
> I have come by a large length of what appears to be Belden 2668 cable. I
> can't find that cable type in any of my catalogs or in the Belden
> on-line catalog. What I have appears little used, with gray PVC
> covering, about 0.5" in diameter, is terminated on both ends with 37-pin
> Centronics-type male connectors, and is marked thus: "Belden AWM STYLE
> 2668." Can anyone tell me what this cable is used for, and how much it
> costs (I probably want to sell it to someone who can use it)? The cable
> also has an inspection tag from what appears to be a vendor (Kertech in
> MA) that refers to "Part # LC37(7S)PP." Thanks.
>
> Will
> KD7BFX

534. Re: FT-243 crystals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: "Ross Harrell, M.D." <n0za@gj.net>
Message-ID: <388690cd@news.gj.net>
Source record: 63987

I also saw a recent ad, can't remember where, for CW Crystals. I think the original owner died, and someone took over the business. I see if I can find it. P.R. Crystals advertises in WorldRadio News. They are a really old line supplier. Their info is:
P.R. Crystals
Petersen Radio Co., Inc.
2735 Ave. A
Council Bluffs, IA 51501
[712] 323-7539
...73, Ross N0ZA

535. MicroWave Books

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: slug@alumni.dee.uc.pt
Message-ID: <864o25$627$1@bbs.aeminium.pt>
Source record: 63988

Hello,
i want your opinion about buying some books so i can start making some experiments with microwave communications (>1GHz). Which books do you recommend, like those from ARRL ?

Thank you,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

536. Re: air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <Vgyh4.933$A45.59465@news.corecomm.net>
Source record: 63989

Hi, Butch.

I think that before anybody can give you meaningful assistance with your problem, we will have to know what kind of equipment you have to work with. 'Scope, rf sig gen, etc. etc.

73, AL

537. Re: need info for MOTOROLA or TRW MX20-2 RF Module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <Wgyh4.935$A45.59465@news.corecomm.net>
Source record: 63990

Hi, Don.

Your module is indeed a TRW device. It is specified as a 400 to 440 mHZ power module with 20 watts output at 12.5 VDC operation. Power gain is 20. Harmonic content is -40 dbc. In and out impedance is 50 ohms. It will withstand infinite VSWR. It also contains a pin by which you can control the gain.

Sounds to me like you got a winner there.

Sorry I don't have pin outs but if nobody can come up with this info, e-mail me and I will search through my stacks of paper and see If I can find it. :)

73, AL. w6wqc, e-mail alforo@megsinet.net

538. Re: air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-19 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <ZKyh4.36380$475.956460@news4.giganews.com>
Source record: 63991

You need some kind of test equipment such as a bridge to measure that capacitor. There actually are many ways to do it but much depends on how important it is to you and what you have around the shack.

For example:
1. A capacitance meter (often part of a digital voltmeter)
2. A capacitance or impedance bridge
3. Known capacitors for comparison; you can, for instance, measure resonant frequency with the unknown in the circuit and then put in various known values and match the frequency
4. Similar to no. 3, but you don't need to match it, just measure and calculate by the difference in frequency using the usual formula

and so on....

But it does pay to understand the theory so you can devise a method based on common sense and the theory of electronics rather than getting someone to tell you how. You know the old saying, give a man a meal and you feed himi for a day - teach him to fish and you feed him for life.

73, Bob K6DDX

539. New Code Requirement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38868CD2.88FC5C10@home.com>
Source record: 63992

Have any OT's jumped out of a window as a result of the new code requirements?

540. Re: FLORIDA TEST EQUIPMENT ?????????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: <>
Message-ID: <onth4.15885$pb2.1232246@tw11.nn.bcandid.com>
Source record: 63993
Cross-posted to: misc.industry.electronics.marketplace,sci.electronics.equipment,sci.electronics.design,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The place in Orlando is called SKYCRAFT and there is one in Melbourne called
ASTRO-TOO. Orlando Hamfest is the weekend of Feb 14, 2000.

Don AF4Z

alsoIn article <385D4AD5.FA718C86@cde.com>, jwatson@cde.com says...
>
>Hi Bob;
>
> In Orlando, there is a place called Skylab, or, skytech, I
>forget which. As we call it skyjunk for short. They have most anything
>you could ask for, and more at reasonable prices. They have test
>equipment also.
> As to hamfests, i'm not sure. Are you looking for anything in
>particular?
>
> John Watson KC4TBH
>
>Bob Greenacre wrote:
>
>> Will be touring Florida in the next couple of weeks.
>>
>> Anyone know of any bargain / surplus / used test equipment outlets
>> or ham swap meets that might be worth a visit ??????
>>
>> Bob Greenacre
>> London - UK
>

541. Re: Cross needle meter source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <3886644D.ABC2B96E@hotmail.com>
Source record: 63994

There was no offense intended with my -duh- statement. Quite the opposite in fact as I was drawing attention to the fact that I was stating something that was patently obvious. I try not to use my backspace key and just kept on truckin'! If you check my history of postings I think you'll find that I am anything but a trasher of ideas.

MC

"Al, N2NKB" wrote:

> The poster was interested in cross needles, not separate movements.
> Why did you trash him with your (duh) statement and discourage him?
> I wish Randall luck with his homebrew activities.
> Al
>
> MC 10kW Jesus wrote in message <387BD3F1.B7DC4B81@hotmail.com>...
> >It is two meters together. (duh) If you're on a homebrew kick, just get two
> >surplus meters that are the same and fabricate your own scale. Better yet,
> >make it an active meter and design a circuit to calculate the VSWR and
> >display this on one meter.
> >
> >MC.
> >
> >
> >
> >"Randall D. DuCharme" wrote:
> >
> >> Greetings,
> >>
> >> For one of my first ham projects I'm going to build an antenna tuner.
> >> Does anyone know of a source for those cross needle meters like MFJ and
> >> others use? I really like the way they look.
> >>
> >> Thanks
> >>
> >> NOTE: To reply directly to me, please remove NO-SPAM from my email
> >> address.
> >> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> >> received as a result of posting to these newsgroups, I find no other
> >> easy
> >> solution.
> >> --
> >> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
> >>
> >> Unsolicited commercial email (SPAM) received at this email address

> >> will not be tolerated. All spam is subject to a $200 per incident
> >> processing fee and possible legal action pursuant to federal
> >> regulations.
> >

542. Re: HELP! Kenwood TS-440SATinterface.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: <>
Message-ID: <Kvth4.15906$pb2.1232246@tw11.nn.bcandid.com>
Source record: 63995

The handbooks since 1995 have a circuit that does the same function as the IF-232. For the TS-940, you will also need a IF-10B which is a circuit board and EPROM that installs inside the radio. The IF-10B is very hard to find since they are no longer made. Used, expect to pay near new price ($80.00)for one.

Don AF4Z

In article <s6org22e5k2133@corp.supernews.com>, sstrock@dreamscape.com says...
>
>ME Too!!!!!!!!
>
>I am looking for the a schematic for the Kenwood IF-232C to connect to my
>TS-440SAT. Finding the IC-10 chipset is not going to be a problem.
>
>I have not looked at the Handbook yet as mentioned in another response. I
>have just started working on this phase of the project. There is one
>manufacturer on the net - http://www.apci.net/~jbi/jbikits.htm - that
>mentions a CW Keying option
>
>Any and all help would be greatly appreciated. I am also going to post
>new message for this.
>
>Stephen
>sstrock@dreamscape.com
>
>>Is it possible to interface my Kenwood TS-940S with my computer and what
>>will I need to do it? I can't fine anything in the 940 manual about an
>>interface.
>>
>>Thanks for your help,
>>
>>Charlie - KA8BLO
>>ka8blo@net-link.net
>>
>>
>>
>
>

543. need info for MOTOROLA or TRW MX20-2 RF Module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: <>
Message-ID: <aMth4.15933$pb2.1232246@tw11.nn.bcandid.com>
Source record: 63996

Can anyone provide the basic info for the MX20-2 RF module. Part is marked with TRW but one source said it was made by Motorola.

I have been offered one for use for 430MHz ATV but not sure it will work.

Power input?
Power output?
Operating Frequency?
Class? C? AB?

Don AF4Z

544. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Jonesy <jonesy@rmi.nospam.net>
Message-ID: <FPth4.896$M4.107858@den-news1.rmi.net>
Source record: 63997

Fractenna <fractenna@aol.com> wrote:
> 19 January 2000
>
> Below is a summary of the threats to harm made by Rick Littlefield.

Please, God, let this thread of cross-posted trash die!

545. I NEED A B&W 850 BAND SWITCH

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: ts950sdx@aol.com
Message-ID: <20000119223521.03558.00000287@ng-cq1.aol.com>
Source record: 63998

HELLO
LOOKING FOR THE B&W BAND SWITCH
EMAIL PRICE THANKS
JOE KF4TOH

546. air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <38868AA4.AFDB08FA@netdoor.com>
Source record: 63999

OMs, YLs, or Cecil :o)

If I have an air variable capacitor with no markings what ever anywhere on them, how can I measure the impedance to know if I can use the rascal? Every one rest easy, I'm not gonna take the extra exam and pass, making you look silly and dumb, before or after the 15th of April. I don't know all I understand now! :o)

Butch KF5DE

547. Re: K1BQT Death Threats--A Plea for help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: maddog@io.com
Message-ID: <388694b5.87358034@news.io.com>
Source record: 64000

On Thu, 20 Jan 2000 01:48:21 GMT, Jonesy <jonesy@rmi.nospam.net>
wrote:

>Please, God, let this thread of cross-posted trash die!

for once, I agree with you, Jonesy...

monty N5FC

548. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Antoon Milatz <antoon.milatz@tek.com>
Message-ID: <3886B5A7.7469E1EE@tek.com>
Source record: 64001

Check out this one:

http://www.geocities.com/SiliconValley/Way/5807/

Antoon

"colinlowe@jet" wrote:

> I am looking for any Amateur radio related projects using the PIC16F84.
>
> I've just starting out playing the PIC's and wondered what projects I could
> build.
> If you have a homepage with the project detailed, please send me the URL.
>
> 73 de Colin
> EB/G1IVG
> Barcelona Spain
> http://personales.jet.es/colinlowe/index.htm

549. Re: Hall-effect sensors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: maciek <bal@mediaservice.com.pl>
Message-ID: <866k2k$fc3$2@news.onet.pl>
Source record: 64002

Go to uksmg.org (uk6meter group) and look for magnetometer in archive.
That's possible that you find something interesting to you.
MAc

550. Re: QRP Kits ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: maciek <bal@mediaservice.com.pl>
Message-ID: <866ju3fap2@news.onet.pl>
Source record: 64003

oo
ludzie jeszcze cos buduja ;-))
Postaw Antka, na lato jak znalazl
73
sp9mrn
MAc

551. MDT Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Greg Kaiser <gkaiser@starnetusa.com>
Message-ID: <3886D31A.DF68F7E4@starnetusa.com>
Source record: 64004
Cross-posted to: rec.radio.noncomm,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hopefully one of you ham radio people can help me out with this problem here,

I work for a security company in the NW Suburbs of Chicago..we have 5 cars that cover this 2 mi apartment complex area. We'd like to setup an MDT System within this 2 mile radius that'll allow the MDT's to communicate to each other & access a database. We can obtain 5 Motorola MDT 9100-11's no problem..I just don't know how to set them up to communicate with each other & access a central database.

If anyone knows how to setup an operation like this, we'd be willing to pay them a few hundred bucks to make this work. Email me at gkaiser@starnetinc.com if you can help me or provide me any information.

Thanks!

-Greg Kaiser

552. Re: New Code Requirement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: jbickel@iquest.net
Message-ID: <3886fd0c.800836@news.iquest.net>
Source record: 64005

On Thu, 20 Jan 2000 01:20:16 GMT, JW <jdwalton@home.com> wrote:

>Have any OT's jumped out of a window as a result of the new code
>requirements?
>

I jumped into one.

553. Re: air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38874279.D6EC2013@home.com>
Source record: 64006

The formula is in the ARRL Handbook - if you know the area of the plates, the spacing and number of plates you can come pretty close to what a capacitance meter would tell you, of course, to find the impedance you have to know the frequency!

Butch Magee wrote:

> OMs, YLs, or Cecil :o)
>
> If I have an air variable capacitor with no markings what ever anywhere
> on them, how can I measure the impedance to know if I can use the
> rascal? Every one rest easy, I'm not gonna take the extra exam and
> pass, making you look silly and dumb, before or after the 15th of
> April. I don't know all I understand now! :o)
>
> Butch KF5DE

554. Re: air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: sparksw4eas@mindspring.com
Message-ID: <867cb2$1g4$1@nntp6.atl.mindspring.net>
Source record: 64007

Measure it on a RLC bridge. Sparks W4EAS

Butch Magee wrote in message <38868AA4.AFDB08FA@netdoor.com>...
>OMs, YLs, or Cecil :o)
>
>If I have an air variable capacitor with no markings what ever anywhere
>on them, how can I measure the impedance to know if I can use the
>rascal? Every one rest easy, I'm not gonna take the extra exam and
>pass, making you look silly and dumb, before or after the 15th of
>April. I don't know all I understand now! :o)
>
>Butch KF5DE
>

555. Re: Need articles from May and June 1997 QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <867i0o$d07$1@nnrp1.deja.com>
Source record: 64008

In article <8658t4$nh7$1@nnrp1.deja.com>,
jstrohm@texas.net <jstrohm@texas.net> wrote:
> There were two articles on high-power Class E amps in the May and
> June 1997 QST. Can somebody photocopy them for me for reasonable
> copy costs?

Found 'em online, along with a couple of other interesting
articles. If you'd like the URL, email me....

Jim

Sent via Deja.com http://www.deja.com/
Before you buy.

556. DTMF/RS232 converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <867e1f$4vort$1@rn.area.com>
Source record: 64009

I would like to do some remote control work over phone lines and one idea I am looking at is using the DTMF pad on the phone to control a computer at the remote site. I need a little board that converts DTMF tones to RS-232, or perhaps software for a sound card that detects the tones (preferably the hardware solution.) I know that 2 meter repeaters can be commanded with DTMF tones, but I don't know a thing about how this is implemented. Another possibility is to connect the tones to the computer via the parallel port.

Once I get the tones detected in the computer, I need to send out RS232 commands to the radio. I would be interested to know if there is some real idiot proof software (like a BASIC interpreter) that can handle this simple task on a grut PC. The problem I've had with other compilers is in the I/O commands. Frequently, the documentation for a BASIC interpreter will say I/O is machine dependent or refer you to documentation for the I/O hardware. Another issue is setting of IRQ's DMA etc. I would like this to be transparent to me as a programmer. (Actually I'm not a programmer, I'm a hardware guy, that's why this needs to be idiot proof).

Has anyone played with using USB as an interface? That would be another possibility.

Rick Karlquist N6RK
rick@area.com

557. Search for info about tube radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Allmaier Hannes <allmaier@sbox.tu-graz.ac.at>
Message-ID: <38873807.9E713A9C@sbox.tu-graz.ac.at>
Source record: 64010

Hello!

I'm want to build a radio working with tubes. I thought it should be possible to get a simple cicuit somewhere for a simple little radio. It need not to be a powerful one, because I plan to connect it to my amplifier (so the radio should only receive and amplify the radio signals, my amp should do the rest).

I'm completly new to this subject and hope that there're some guys out there who can help me.

THANXX YA

hannes allmaier

558. Cross needle meter source....again

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <j6Hh4.163$6L1.4958@news.inreach.com>
Source record: 64011

Because my e-mail software doesn't show previous threads on this, perhaps this is repetitious.

The cross needle meters like the ones MFJ uses in their tuners, can be bought from MFJ! I replaced one in a friend's tuner. The cost was something over $20 as I recall, but we wanted the tuner to work and considered that a necessary expense. I called MFJ and they were happy to send me the meter....

For the typical ham who likes to scrounge parts, that may seen a bit high for a meter, but the retail price of meters is always high.

Roger K6XQ

559. Re: Hall-effect sensors?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <J1eHOPTmc=y5nA1SXxLJ04JxOHcD@4ax.com>
Source record: 64012

On 19 Jan 2000 11:48:35 -0600, mcalhoun@ksu.edu (Myron A Calhoun) wrote:
>What I'd like to do is make a "radiation sensor" which senses "radiation"
>simulated by a magnetic field, for use in hazmat drills. I'd like to be
>able to scatter "sand" mixed with some tiny bits of magnets and then have
>trainees detect the "bad stuff" as if they were using a radiation monitor.

I think you're going about this the wrong way. Think metal detector
instead.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

560. Air variables measure, tnx

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <3887713A.A57D07D1@netdoor.com>
Source record: 64013

I want to thank everyone that responded to my request for help on finding out just what the range of variable caps.

Thanks 73
Butch

561. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38864c39.14914652@news.online.no>
Source record: 64014

On Wed, 19 Jan 2000 20:05:50 +0000, E. Skelton <Xnospam@oceanfree.net>
wrote:

>On Tue, 18 Jan 2000, colinlowe@jet.es wrote:
>
>>I've just starting out playing the PIC's and wondered what projects I could
>>build.
>>If you have a homepage with the project detailed, please send me the URL.
>>
>>73 de Colin
>>EB/G1IVG
>
>There is a very simple iambic keyer on my homepage.
>
>http://www.qsl.net/ei9gq/iambic.html
>
>
>73, Ed. EI9GQ.
>
>--
>
simple keyers and sidetone-oscillators is what one already solves
using a "couple of transistors", I thought these IC's were for solving
more complex problems with little hardware?

73 jan-martin LA8AK

562. Re: Variac schematic symbol

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Mr G H Ireland <igor@argonet.co.uk>
Message-ID: <na.65786c4983.a70320igor@argonet.co.uk>
Source record: 64015

In article <3885B371.4CFD38F@naples.infi.net>, Marty
<martyk@naples.infi.net>
(snip request)
Have a look at alt.binaries.pictures.radio.
I've attempted to draw a Variac schematic - any good?
G3CCL

--

```
__ __ __ __ __ ___ ___________________________________________
|__||__)/ __/ \|\ ||_ | /
| || \\__/\__/| \||__ | /...Internet access for all Acorn RISC machines
____________________________/ igor@argonet.co.uk
```

563. Re: Variac schematic symbol

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: Marty <martyk@naples.infi.net>
Message-ID: <38879EFF.56CD2640@naples.infi.net>
Source record: 64016

Mr G H Ireland wrote:

> In article <3885B371.4CFD38F@naples.infi.net>, Marty
> <martyk@naples.infi.net>
> (snip request)
> Have a look at alt.binaries.pictures.radio.
> I've attempted to draw a Variac schematic - any good?
> G3CCL
>
> --
> __ __ __ __ __ ___ ____
> |__||__)/ __/ \|\ ||_ | /
> | || __/__/| \||__ | /...Internet access for all Acorn RISC machines
> ____________________________/ igor@argonet.co.uk

Didn't find it in alt.binaries.pictures.radio. Could you attach it to an
e-mail?

Thanks and 73,

Marty K1FHR

564. Tube / Parts take a look

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: yodabean1@yahoo.com.nospamplease
Message-ID: <knkf8somvlo0trd0nrifh0j0o59fjsr005@4ax.com>
Source record: 64017
Cross-posted to: rec.radio.amateur,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.swap,rec.radio.shortwave,rec.radio.swap

Hi;

One lot of (250) 9 pin miniature tube shields. These are for the
12AX7, 12AU7 ...etc tubes. Current bid is only $10.50 on the entire
lot.

I have seen these go for over $3.00 each on the net.

This is the last lot I will have up. I doubt you will ever find a deal
like this again!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=241152438

565. 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-20 00:00:00 UTC
From: danderso@inlandnet.net
Message-ID: <3886dbf0.24771698@news.inlandnet.net>
Source record: 64018

I need a schematic for a simple transmitter. The frequency range
needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
see if my weather satellite receiver is detecting any signal at all.
Thanks!
Don
danderso@inlandnet.net

566. Re: DTMF/RS232 converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8689fc$v8i$1@nnrp1.deja.com>
Source record: 64019

In article <867e1f$4vort$1@rn.area.com>,
rick@vax.area.com (Richard Karlquist) wrote:
>
> I would like to do some remote control work over phone lines and
> one idea I am looking at is using the DTMF pad on the phone to
> control a computer at the remote site. I need a little board that
> converts DTMF tones to RS-232, or perhaps software for a sound card
> that detects the tones (preferably the hardware solution.) I know
> that 2 meter repeaters can be commanded with DTMF tones, but I
> don't know a thing about how this is implemented. Another possibility
> is to connect the tones to the computer via the parallel port.
>
> Once I get the tones detected in the computer, I need to send out
> RS232 commands to the radio. I would be interested to know if there
> is some real idiot proof software (like a BASIC interpreter) that
> can handle this simple task on a grut PC. The problem I've had
> with other compilers is in the I/O commands. Frequently, the
> documentation for a BASIC interpreter will say I/O is machine
> dependent or refer you to documentation for the I/O hardware.
> Another issue is setting of IRQ's DMA etc. I would like this to
> be transparent to me as a programmer. (Actually I'm not a programmer,
> I'm a hardware guy, that's why this needs to be idiot proof).
>
> Has anyone played with using USB as an interface? That would
> be another possibility.
>
> Rick Karlquist N6RK
> rick@area.com
>
>
I think MOTRON has DTMF to RS-232 converters.
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

567. Re: Search for info about tube radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <868auq$s5p$1@news1.exit109.com>
Source record: 64020

sir,

try a 6sn7gt or 6u8 regen receiver
as in the 50s and 60s ARRL HB.

search for "6sn7 regen circuit" in www.google.com

(hint : drop the powerful amp , use a hi Z headphones instead)

Allmaier Hannes wrote in message <38873807.9E713A9C@sbox.tu-graz.ac.at>...
>Hello!
>
>I'm want to build a radio working with tubes. I thought it should be
>possible to get a simple cicuit somewhere for a simple little radio. It
>need not to be a powerful one, because I plan to connect it to my
>amplifier (so the radio should only receive and amplify the radio
>signals, my amp should do the rest).
>
>I'm completly new to this subject and hope that there're some guys out
>there who can help me.
>
>THANXX YA
>
>hannes allmaier

568. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: maddog@io.com
Message-ID: <3887c781.474034@news.io.com>
Source record: 64021

On Thu, 20 Jan 2000 21:18:06 GMT, LA8AK@online.no (J M Noeding) wrote:

>simple keyers and sidetone-oscillators is what one already solves
>using a "couple of transistors", I thought these IC's were for solving
>more complex problems with little hardware?

Jan-Martin, care to share a schematic with us of an iambic keyer with
sidetone that uses a "couple of transistors"? How 'bout a dozen?

Really...

73,
monty N5FC

569. WANTED Admiralty B41 Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: gtelford@telia.co.uk
Message-ID: <388c0ceb.90145097@news.freeuk.net>
Source record: 64022

Has anyone got an Admiralty B41 Receiver for sale.
In the UK please as it weighs too much to post

570. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: davem@groucho.cs.ubc.ca
Message-ID: <8695de$o04@groucho.cs.ubc.ca>
Source record: 64023

danderso@inlandnet.net (Don Anderson) writes:
>I need a schematic for a simple transmitter. The frequency range
>needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
>see if my weather satellite receiver is detecting any signal at all.

You may have thought of this already, but:

See if you can borrow a SWR measuring device like an Autek RF-5 or the
MFJ equivalent. These contain a variable-frequency oscillator that
can be adjusted over a wide frequency range plus a frequency counter.
Attach a bit of wire to the output and you have a low-power transmitter,
without building anything.

Dave

571. *Wanted-6m Multimode Rig*

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <869816hku2@news7.svr.pol.co.uk>
Source record: 64024

I'm still looking for a 6m multimode rig.
Please send details to address below.
Many thanks.
John.

john@mm1dsp.freeserve.co.uk

572. For Sale Test Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Howard Rudy <hrudySPAM@lgcy.com>
Message-ID: <38882438.E9B503E5@lgcy.com>
Source record: 64025

Sencore
CVA-94 for Color Video Camera testing and alignment.
VR-940 Light Box with alignment slides (condition; like new, 9)

Hewlett Packard
HP 606 signal gen. (condition; very very good, 8)

Texscan
VS-40A Sweep marker gen. (condition; very good, 7)

Marconi Inst., LTD
TF-1099 20Mhz Sweep gen. (condition; fair, 5)

Jerrold
704B TV Signal Strenght Meter (condition, poor/fair, 4)

Will sell for best offer.
contact me at <hrudy@lgcy.com>
Or you can call me at 801-532-8511
KA7YWO
Howard Rudy
Salt Lake City, Ut.

573. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Greg Blair <gblair@sympatico.ca>
Message-ID: <38886CDD.D1B83A1B@sympatico.ca>
Source record: 64026

I just went through this aligning a Hamtronics R139 WeSAT receiver kit using a MFJ 259B Antenna Analyser. The kit went together fast. All 5 channels worked and could hear the 259 as I swept the signal across a given channel. As the receiver alignment improved, I needed to attenuate the signal. I placed the 259 further and further down the hall on the floor.

What you really need (and me too) is a stable signal generator with an attenuator for reducing the signal output. The 259 was adequate, but the frequency was not as stable as it should be to do a proper job.

Good luck with your receiver.

Cheers, Greg

Don Anderson wrote:

> I need a schematic for a simple transmitter. The frequency range
> needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
> see if my weather satellite receiver is detecting any signal at all.
> Thanks!
> Don
> danderso@inlandnet.net

574. Re: Search for info about tube radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: n0za <n0zaNOn0SPAM@gj.net.invalid>
Message-ID: <05a31520.a8de8ee7@usw-ex0109-070.remarq.com>
Source record: 64027

There are a bunch of circuits described at:
http://www.qsl.net/n6ev/1957.html The site is called
glowbugs and can also be located by a searc engine if you
ask for "glowbugs amateur radio." You didn't mention what
frquencies you wanted to receive. The tubes for these
projects are easy to locate, some of the other parts
present more of a problem. Cordially, Ross N0ZA

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages,
Images, Audios, Videos, News, and Shopping. Smart is Beautiful

575. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Allan Dobler <Allan.Dobler@crha-health.ab.ca>
Message-ID: <38887756.2AC0BAE8@crha-health.ab.ca>
Source record: 64028

Head off to your local 2 way shop with your project and a case of
Budwieser. I am sure a radio tech there will help you set up his service
monitor to align your rx.
Allan

Don Anderson wrote:

> I need a schematic for a simple transmitter. The frequency range
> needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
> see if my weather satellite receiver is detecting any signal at all.
> Thanks!
> Don
> danderso@inlandnet.net

576. TUBES..TUBES..TUBES..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <86a29ncmq1@ruby.mint.net>
Source record: 64029

THOUSANDS OF TUBES FOR SALE.
gbrown@mint.net

THANK YOU
GARY

577. Parts supplier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Jim Pennino <jimp@specsol.com>
Message-ID: <se3a68.nql.ln@mail.specsol.com>
Source record: 64030

Anyone know of a source for MC2833 and MC13135 ICs that will sell in hobby quantities?

FYI, these are FM transmitter and receivers.

Jim Pennino

578. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <3888BCF5.1EBF423E@corecomm.net>
Source record: 64031
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Roma wrote:
> Larry Gagnon wrote:
> > Attached is the National semiconductor circuit suggestion for a
> > 1.5-30V constant current/constant voltage power supply.
>
> Where is the attachment?

Binary attachments, which don't belong in non-binary newsgroups, are
frequently chopped off by large-scale news servers before the article
they were attached to is forwarded to other news servers. It might even
be that Larry's own system chopped it off before posting his article.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

579. Re: DTMF/RS232 converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: tmelcon@mit.edu
Message-ID: <3888c46e$0$22459@senator-bedfellow.mit.edu>
Source record: 64032

In article <867e1f$4vort$1@rn.area.com>,
Richard Karlquist <rick@vax.area.com> wrote:
>
>control a computer at the remote site. I need a little board that
>converts DTMF tones to RS-232, or perhaps software for a sound card
>that detects the tones (preferably the hardware solution.) I know

If you can't find one chip that will do it, the easiest way would be to connect the four data lines from a DTMF decoder IC to four of the data lines on a UART. The DTMF decoder should have a line that pulses when good data is received; connect this to the strobe on the UART transmitter. A level converter on the UART output and you should be all set. You'll want to try to get an older UART that has lots of pins and can be programmed with fixed connections; the newer ones are generally designed to be interfaced to a microprocessor and it can be hard to set the parameters easily. The one I used is no longer made - by a company that no longer exists... :-/ If you're looking for more detail let me know and I"ll try to find my data sheets.

580. Keyshaping circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Todd Kellenbenz <todd.kellenbenz@enron.com>
Message-ID: <86ale8$n3k$1@nnrp1.deja.com>
Source record: 64033

I'm looking for a circuit or a general description of how to build a keyshaping circuit for soft turn on/off of a Morse code keyer. The 1999 ARRL Handbook describes what they do, but does not indicate how to go about building one. Can anyone help?

Thanks,

Todd K.

Sent via Deja.com http://www.deja.com/
Before you buy.

581. VolksRTTY II QST Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Doug Snowden <dsnowden@ncdc.noaa.gov>
Message-ID: <3888C70A.A63B12F5@ncdc.noaa.gov>
Source record: 64034

Anyone got a copy (or make a copy) of this for me?
I tossed my mags. I think it was in OCT-NOV 99 QST ? I'll pay for copy
of course.

Doug N4IJ
dsnowden@ncdc.noaa.gov

582. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3888aeef.171280169@news.online.no>
Source record: 64035

On Fri, 21 Jan 2000 02:45:22 GMT, maddog@io.com wrote:

>On Thu, 20 Jan 2000 21:18:06 GMT, LA8AK@online.no (J M Noeding) wrote:
>
>>simple keyers and sidetone-oscillators is what one already solves
>>using a "couple of transistors", I thought these IC's were for solving
>>more complex problems with little hardware?
>
>Jan-Martin, care to share a schematic with us of an iambic keyer with
>sidetone that uses a "couple of transistors"? How 'bout a dozen?
>
>Really...
>
>73,
>monty N5FC
>
still, not much challenge!

583. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3888af2b.171341084@news.online.no>
Source record: 64036

On Thu, 20 Jan 2000 10:00:43 GMT, danderso@inlandnet.net (Don Anderson) wrote:

>I need a schematic for a simple transmitter. The frequency range
>needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
>see if my weather satellite receiver is detecting any signal at all.
>Thanks!
>Don
>danderso@inlandnet.net

signal generator will do, and it may possible to borrow one

584. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Gary Danaher <gdanaher@home.com>
Message-ID: <3888E3C2.1E967174@home.com>
Source record: 64037
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Using these coax lengths, hook your exciter to the dummy load with an
swr meter in series and see what you have. Should be flat at any
frequency.

Grant Hopper wrote:
>
> I have several lengths of coax (some RG-58, belden 8237, and RG 213) that
> have had uncertian histories. At least one of the lengths has spent
> several days under water (fresh and salt) however all of them are clean so
> visual inspection has not been conclusive. I'd like to find the bad ones
> since several of the lengths are reported to be fine and they are from 25
> feet to almost 100 feet long.
>
> I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and
> HF and vhf rigs but nothing like a signal generator.
>
> Any advice on this topic would be appreciated, even if it's just a
> reference to an article in QST or other publication.
>
> Thanks.
>
> Grant Hopper
> KB7WSD
>
> --
> G.F. Hopper
> KB7WSD
>
> "Remember, you can always quit before it gets really bad."
> -

585. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Gary Danaher <gdanaher@home.com>
Message-ID: <3888E3D5.46EC2543@home.com>
Source record: 64038
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Using these coax lengths, hook your exciter to the dummy load with an
swr meter in series and see what you have. Should be flat at any
frequency.

Grant Hopper wrote:
>
> I have several lengths of coax (some RG-58, belden 8237, and RG 213) that
> have had uncertian histories. At least one of the lengths has spent
> several days under water (fresh and salt) however all of them are clean so
> visual inspection has not been conclusive. I'd like to find the bad ones
> since several of the lengths are reported to be fine and they are from 25
> feet to almost 100 feet long.
>
> I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and
> HF and vhf rigs but nothing like a signal generator.
>
> Any advice on this topic would be appreciated, even if it's just a
> reference to an article in QST or other publication.
>
> Thanks.
>
> Grant Hopper
> KB7WSD
>
> --
> G.F. Hopper
> KB7WSD
>
> "Remember, you can always quit before it gets really bad."
> -

586. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3888ED17.41AA8805@dialpoint.net>
Source record: 64039
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

The SWR will not really tell much. The swr could be very low and the
cable could be very lossy. This is especially true of the cable that
was under water.

With the equipment at hand, hook the wattmeter to the dummy load and
measure the power of the highest frequency transmitter. Then hook the
cable to be tested to the transmitter, then the watt meter then the
dummy load. The differance will give the loss of the cable. There are
tables that tell how much loss the cables should have at the frequency
under test.

Gary Danaher wrote:
>
> Using these coax lengths, hook your exciter to the dummy load with an
> swr meter in series and see what you have. Should be flat at any
> frequency.
>
> Grant Hopper wrote:
> >
> > I have several lengths of coax (some RG-58, belden 8237, and RG 213) that
> > have had uncertian histories. At least one of the lengths has spent
> > several days under water (fresh and salt) however all of them are clean so
> > visual inspection has not been conclusive. I'd like to find the bad ones
> > since several of the lengths are reported to be fine and they are from 25
> > feet to almost 100 feet long.
> >
> > I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and
> > HF and vhf rigs but nothing like a signal generator.
> >
> > Any advice on this topic would be appreciated, even if it's just a
> > reference to an article in QST or other publication.
> >
> > Thanks.
> >
> > Grant Hopper
> > KB7WSD
> >
> > --
> > G.F. Hopper
> > KB7WSD
> >
> > "Remember, you can always quit before it gets really bad."
> > -

587. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-21 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2101002325550001@dialup-1043.hip.cam.org>
Source record: 64040

In article <3888af2b.171341084@news.online.no>, LA8AK@Online.NO wrote:

> On Thu, 20 Jan 2000 10:00:43 GMT, danderso@inlandnet.net (Don
> Anderson) wrote:
>
> >I need a schematic for a simple transmitter. The frequency range
> >needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
> >see if my weather satellite receiver is detecting any signal at all.
> >Thanks!
> >Don
> >danderso@inlandnet.net
>
> signal generator will do, and it may possible to borrow one

Considering the frequency, a signal generator is far more appropriate
than a transmitter.

Unless the receiver is completely destroyed, the problem will be
getting a weak enough signal, not a strong enough signal.

Michael VE2BVW

588. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3889004b.192111888@news.online.no>
Source record: 63895
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

On Fri, 21 Jan 2000 18:34:47 -0500, Ralph Mowery
<rmowery@dialpoint.net> wrote:

>The SWR will not really tell much. The swr could be very low and the
>cable could be very lossy. This is especially true of the cable that
>was under water.
>
>
>With the equipment at hand, hook the wattmeter to the dummy load and
>measure the power of the highest frequency transmitter. Then hook the
>cable to be tested to the transmitter, then the watt meter then the
>dummy load. The differance will give the loss of the cable. There are
>tables that tell how much loss the cables should have at the frequency
>under test.
>
or compare with almost similar length of cable

589. Re: Parts supplier?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <3889071B.CD25421A@sympatico.ca>
Source record: 63896

Jim Pennino wrote:
>
> Anyone know of a source for MC2833 and MC13135 ICs that will sell in hobby
> quantities?
>
> FYI, these are FM transmitter and receivers.
>
> Jim Pennino

Newark. On the web at http://www.newark.com

Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

590. Re: WONDERBAR RADIO FOR '57 CHEVIES - EXCELLENT!!! (fwd)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <86b1ov$5k$1@news1.exit109.com>
Source record: 63897

IS it the WONDER.B.R.A. RADIO for chevvies !!!

Louis wrote in message ...
>
>
>
>www.ebay.com item 238999733
>
>
>FS: wonderbar Radio for a '57 Chevrolet Belair, 210 and all related
\

591. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: maddog@io.com
Message-ID: <3889231e.77874209@news.io.com>
Source record: 63898

>JW (jdwalton@home.com) wrote:
>: I have been searching in vain for a SPICE model for the 4046 PLL, anyone
>: care to point me in the right direction?

go to
http://www.intersil.com/search/
and query '4046'

Just for Info sake, most of the semiconductor manufacturers have been working diligently to provide online access to data sheets and Spice models. (web pages are a whole lot cheaper than data books). They generally concentrate on "web-ifying" their current product line first, then work backwards from there. There has been an amazing increase in the amount of info available online in just the past year.

73,
monty

592. WTB: 160 m link coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000121232910.03675.00001201@ng-fr1.aol.com>
Source record: 63899

Looking for excellent condition legal limit link coil like BC-610, Johnson, Millen, etc.

73

Evan

593. FA: Collis Mechanical Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <lJai4.1195$en6.17775474@server2.news.adelphia.net>
Source record: 63900
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Model F455Q6... for 455 kHz IF... I believe it has a 6 kHz passband (+/- 3 kHz)... ideal for AM reception... I put it in a radio and it works fine.

NO RESERVE!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=242652323

594. help with a problem with a yeasu ft-101z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: kc7byp@icehouse.net
Message-ID: <38898d9d.3084994@news.icehouse.net>
Source record: 63901

i have a ft-101z. all bands but 160 and 80 work just fine, all i get on 160 and 80 meter bands is noize, i can turn on my old short wave recever on the same antenna at the same time and pick up all kinds of things on 160 and 80 but not on the 101z. the transmiter works just fine on the dummy load test on 160 and 80 bands i get full power and good mod swing. can someone help me with this problem?

also does anyone know how to add fm mode to this radio?

595. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3889D6B2.5505A2C7@home.com>
Source record: 63902

Thanks! I pulled the model off their list this a.m. - it wasn't on the Nat Semi site.

maddog@io.com wrote:

> >JW (jdwalton@home.com) wrote:
> >: I have been searching in vain for a SPICE model for the 4046 PLL, anyone
> >: care to point me in the right direction?
>
> go to
> http://www.intersil.com/search/
> and query '4046'
>
> Just for Info sake, most of the semiconductor manufacturers have been
> working diligently to provide online access to data sheets and Spice
> models. (web pages are a whole lot cheaper than data books). They
> generally concentrate on "web-ifying" their current product line
> first, then work backwards from there. There has been an amazing
> increase in the amount of info available online in just the past year.
>
> 73,
> monty

596. Re: help with a problem with a yeasu ft-101z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <86ceq3$q51$1@news1.exit109.com>
Source record: 63903

burnt 40673 in the front end.

steve eizenberg wrote in message <38898d9d.3084994@news.icehouse.net>...
>i have a ft-101z. all bands but 160 and 80 work just fine, all i get
>on 160 and 80 meter bands is noize, i can turn on my old short wave
>recever on the same antenna at the same time and pick up all kinds of
>things on 160 and 80 but not on the 101z. the transmiter works just
>fine on the dummy load test on 160 and 80 bands i get full power and
>good mod swing. can someone help me with this problem?
>
>also does anyone know how to add fm mode to this radio?
>

597. Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: kg4fet@aol.com
Message-ID: <20000122103152.03575.00000934@ng-cf1.aol.com>
Source record: 63904

I need to stack 2 pwr supplies to supply my FT 100 with the proper current. My AIM 20 is getting to hot for my tastes. I get full out of the radio but the supply is way to hot if I do any rag chewing. I put a fan on it and that seems to help but I would like to take it easier on it. Here is the question. Can I hook the second supply directly to the the AIM's output or should I use a bus strip? The second supply is a Johnson Power 15 amp rated supply used for a Johnson business band base radio. The output voltage is the same on on both (13.98+/-.03 volts). There is not a switch on the Johnson pwr supply to turn it off, but that can be fixed.
Any Help would be appreciated,
Sandor KG4FET

598. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: dm <dmandjos@olypen.com>
Message-ID: <qFki4.42286$475.1085053@news4.giganews.com>
Source record: 63905
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Correct....If you can mooch a Bird Wattmeter, you'll do better, though.
Depending upon your frequency, you "may" find out why so many of us choose
to run 450 ohm twinlead instead of coax!
VY 73.... "DM"

599. Re: help with a problem with a yeasu ft-101z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Greg Blair <gblair@sympatico.ca>
Message-ID: <3889D9A9.BEFCF6CB@sympatico.ca>
Source record: 63906

On you receive problem, is it possible that you have a dirty switch contact on the receiver front end bandswitch??? Try cleaning the switch contacts with some contact cleaner.

steve eizenberg wrote:

> i have a ft-101z. all bands but 160 and 80 work just fine, all i get
> on 160 and 80 meter bands is noize, i can turn on my old short wave
> recever on the same antenna at the same time and pick up all kinds of
> things on 160 and 80 but not on the 101z. the transmiter works just
> fine on the dummy load test on 160 and 80 bands i get full power and
> good mod swing. can someone help me with this problem?
>
> also does anyone know how to add fm mode to this radio?

600. MFJ-8100 World Band Rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: abailey@clas.net
Message-ID: <1e4t22x.639fwvpev88uN%abailey@clas.net>
Source record: 63907

Hello All, I've been looking at the MFJ-8100K World Band Rcvr kit for $69.95 from MFJ Enterprises in MS. Has anyone built this kit and or using it.
Any opinions on it, Thanks, Tony

--
Sent from Anthony Bailey's (abailey@clas.net)
Apple Powerbook 280c in Marble Hill, Missouri

601. Re: Help with AC noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <86cpvk$50f$1@news1.exit109.com>
Source record: 63908

get a better quality monitor like viewsonic, panasonic, hitachi 21 inch
models.

thos 15 inch monitors are really bad in quality and shielding.

kd8gt wrote in message ...
>My computer monitor is very dirty, producing a buzzing ac noise about
>10 kcs wide at every 50 kcs on ALL the HF bands on all my hf
>receivers. It doesn't effect VHF. I doesn't matter if a rig is next to
>it or across the room, it's the same. I have isolated it to the
>monitor, turning it off, eliminates the noise so it's not the
>computer. Turning monitor off is not a option as I want to use it for
>logging. Rigs are grounded good to a earth ground. Any suggestions,
>short of buying different monitor? By the way it's not a cheap
>monitor, 400 dollar range 17". Suggestions please?

602. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <O8ni4.55943$905.1110976@news5.giganews.com>
Source record: 63909

Sandor, you shouldn't parallel power supplies. There will be no way they will share the current; the one with the highest output will take nearly all the load.

Further, you shouldn't operate your radio at 13.8 Volts. That stresses it too much. Set it for 12.5 Volts.

If you want to parallel power supplies there are ways but it's not trivial. One way is to put a small resistor in series with each supply. That way, when one draws current its output will drop a bit and the other will share some. But that will spoil regulation, as well as throw away power in the resistors.

You would be better advised to build or buy a larger power supply. Or get into the ones you have and modify them to share; that's more difficult. Or, finally, put a fan on the one you are using to keep it cooler.

73, Bob

603. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: W6PSK <w6pskDROPTHIS@ANDTHISarrl.net>
Message-ID: <sdni4.11121$Sc2.143879@news1.rdc1.sdca.home.com>
Source record: 63910

Connecting power supplies in parallel can be tricky. The
load current may not be divide equally, especially if the
supplies are not identical. It is also possible that one
supply could be damaged during startup when one comes
on before the other. Unless you have a thorough understanding
of power supply design and the designs of your specific
supplies, safest thing is to just use one supply which can
handle the entire job.

-- John W6PSK

KG4FET <kg4fet@aol.com> wrote in message
news:20000122103152.03575.00000934@ng-cf1.aol.com...
> I need to stack 2 pwr supplies to supply my FT 100 with the proper
current. My
> AIM 20 is getting to hot for my tastes. I get full out of the radio
but the
> supply is way to hot if I do any rag chewing. I put a fan on it and
that seems
> to help but I would like to take it easier on it. Here is the
question. Can I
> hook the second supply directly to the the AIM's output or should I
use a bus
> strip? The second supply is a Johnson Power 15 amp rated supply used
for a
> Johnson business band base radio. The output voltage is the same on
on both
> (13.98+/-.03 volts). There is not a switch on the Johnson pwr supply
to turn
> it off, but that can be fixed.

604. SAW question....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <388A0610.AC88C4FA@Rasdoc.com>
Source record: 63911

I know that you can pull crystal oscilators +/-50ppm.

Can you pull SAW oscilators?

If so, how?

I'm looking at building a very simple one transistor transmitter for finding lost RC aircaft.

I have a schematic for a one transistor SAW resonator on 433.92 Mhz. It uses a panasonic SAW device. I'd like to induce a steady 1Khz FM tone so that it can be tracked with a cheap scanner, or 70cm HT.

Paul

605. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2201001437400001@dialup-1126.hip.cam.org>
Source record: 63912
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

In article <3888BCF5.1EBF423E@corecomm.net>, "Clifton T. Sharp Jr."
<clifto@corecomm.net> wrote:

> Roma wrote:
> > Larry Gagnon wrote:
> > > Attached is the National semiconductor circuit suggestion for a
> > > 1.5-30V constant current/constant voltage power supply.
> >
> > Where is the attachment?
>
> Binary attachments, which don't belong in non-binary newsgroups, are
> frequently chopped off by large-scale news servers before the article
> they were attached to is forwarded to other news servers. It might even
> be that Larry's own system chopped it off before posting his article.
>
That's interesting. I know that binaries can be cancelled, but didn't know
that binary attachments might be merely chopped off. I've always assumed
that
when I see a message saying a binary is attached, and there's no binary,
that the sender had goofed.

Too bad about all the ads in rec.radio.amateur.homebrew They do seem
to be on an increase, and as expected, they don't stop at items specifically
related to building radio equipment, not that those are particularly
on topic in a discussion newsgroup.

Michael VE2BVW

606. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: david@slack.com
Message-ID: <86d2kofgc1@spies.com>
Source record: 63913
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

In article <3884BD37.CDC832AE@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
>You didn't ask where pin 7
>goes...one of my schematics shows it going to the output voltage, though
>that then assumes an op amp with input common mode range that goes all
>the way to the + supply and even slightly beyond, which I don't think
>the LM301A will do!

Yes, the LM301A has a common mode input range up to the positive
supply voltage. The common biFET op amps (TL081) do too.

Note, there is an unfortunate problem with this type of power
supply... when the line voltage is turned off, the output voltage
tends to rise quite a bit while the filter cap discharges. Be sure to
check for this behavior before connecting anything that might be
damaged by it.

607. Test Equipment Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: BarryG <bgNOSPAM@albany.net>
Message-ID: <86d2ulleu1@news.monmouth.com>
Source record: 63914

If anyone can advise me of whether a Superior Instruments 650-A is a decent enough signal generator to do receiver alignment, I would appreciate it. I've been offered one as-is for $30 sight unseen, and am not familiar with the beast.

Tnx & 73,
Barry N1EU

(if replying by email, please remove "NOSPAM" from my address - bee gee at albany dot net)

608. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <388A1898.DC55B5E3@dialpoint.net>
Source record: 63915

While one should not parallel power supplies unless they are designed
that way, most ham radios are designed for 13.8 volts. That is a
nominal voltage for most vehicles. The battery is about 12.6 but to
charge them you need a higher voltage.

Bob wrote:
>
> Sandor, you shouldn't parallel power supplies. There will be no way they
> will share the current; the one with the highest output will take nearly all
> the load.
>
> Further, you shouldn't operate your radio at 13.8 Volts. That stresses it
> too much. Set it for 12.5 Volts.
>

609. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: asena@bigfoot.com
Message-ID: <388a1942.3878996@news.telepac.pt>
Source record: 63916

On Fri, 21 Jan 2000 22:22:10 GMT, LA8AK@online.no (J M Noeding) wrote:

>On Fri, 21 Jan 2000 02:45:22 GMT, maddog@io.com wrote:
>
>>On Thu, 20 Jan 2000 21:18:06 GMT, LA8AK@online.no (J M Noeding) wrote:
>>
>>>simple keyers and sidetone-oscillators is what one already solves
>>>using a "couple of transistors", I thought these IC's were for solving
>>>more complex problems with little hardware?
>>
>>Jan-Martin, care to share a schematic with us of an iambic keyer with
>>sidetone that uses a "couple of transistors"? How 'bout a dozen?
>>
>>Really...
>>
>>73,
>>monty N5FC
>>
>still, not much challenge!

hey man....you are my hero !!

Ant&#65533;nio S&#65533;rgio Sena
CT2GPW "They say a city in the desert lies
asena@bigfoot.com The vanity of an ancient king
Tel:351967033209 With every prison blown to dust
Electronics and My enemies walk free
Robotics Student Though all my kingdoms turn to sand
Anfei - Siemens And fall into the sea
I am mad about you"

610. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <s8k8uqooeh686@corp.supernews.com>
Source record: 63917

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Sorry, but I looked at that model and it is NOT a model of the 4046 PLL
chip.

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- --
NCI-1052
Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- --
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

"JW" <jdwalton@home.com> wrote in message news:3889D6B2.5505A2C7@home.com...
> Thanks! I pulled the model off their list this a.m. - it wasn't on the Nat
Semi
> site.
>
> maddog@io.com wrote:
>
> > >JW (jdwalton@home.com) wrote:
> > >: I have been searching in vain for a SPICE model for the 4046 PLL,
anyone
> > >: care to point me in the right direction?
> > >
> > go to
> > http://www.intersil.com/search/
> > and query '4046'
> > >
> > Just for Info sake, most of the semiconductor manufacturers have been
> > working diligently to provide online access to data sheets and Spice
> > models. (web pages are a whole lot cheaper than data books). They
> > generally concentrate on "web-ifying" their current product line
> > first, then work backwards from there. There has been an amazing
> > increase in the amount of info available online in just the past year.
> > >

> > 73,
> > monty
>
-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBOIojtZe+N6+q84HiEQJPXgCgqgkvUP8TXCtC4XAmDi0Fg9Ss09wAniE2
Gxz5Hp8kJC9gVEGbdPHfNaR5
=evJN
-----END PGP SIGNATURE-----

611. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <86d77g$l84@unix1.cc.ksu.edu>
Source record: 63918

kg4fet@aol.com (KG4FET) writes:
>I need to stack 2 pwr supplies to supply my FT 100 with the proper current. My
>AIM 20 is getting to hot for my tastes. I get full out of the radio but the
>supply is way to hot if I do any rag chewing. I put a fan on it and that seems
>to help but I would like to take it easier on it. Here is the question. Can I
>hook the second supply directly to the the AIM's output or should I use a bus
>....[snip]....

Others have responded well to your query about (generally not) paralleling
power supplies.

But no one questioned WHY your FT-100 is overloading a (presumably) 20-amp
power supply. Even if the "20" is "max for a very short while", unless
your "AMP 20" is really unusual, it ought to supply something like 13-15
amps practically "forever". I've never owned an FT-100, but guessing
it to be rated at about 250 watts PEP, or about 125 watts DC, it ought
to need about 10 amps for the final plus a couple or three for the other
circuitry. Unless you have a speech processor driving it like mad, or
unless your "rag chewing" is actually RTTY, I'm surprised that your
power supply can't handle that demand.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (Professor Emeritus) "Barbershop" tenor. CDL(PTX) W0PBV (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

612. OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Brian Hill <jonnysocko@jps.net>
Message-ID: <388a61c4_2@news.jps.net>
Source record: 63919

Need 20mfd x 4 450v .
Thanks
73 Brian

Brians Radio Universe
http://www.jps.net/jonnysocko

613. Re: OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <86dolt$le9$1@bgtnsc01.worldnet.att.net>
Source record: 63920

Brian Hill wrote in message <388a61c4_2@news.jps.net>...
>Need 20mfd x 4 450v .
>Thanks
>73 Brian
>
>Brians Radio Universe
>http://www.jps.net/jonnysocko
>
One "can" or discretes?
Al

614. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <388A7647.DA31BE0D@dialpoint.net>
Source record: 63921

The why is efficiency. Many transistor circuits do good to get around 50 % . I have a FT 757 that is a nominal 100 watt output rig. It will put out more than that on 80 meters, almost 150 watts without any problems. On 10 meters it just does make 100 watts . That is into a dummy load and Bird meter. The book calls for 19 amps of current at full load. I will assume that is only at 100 watts out.

The 10 amps you mention is only good if the transmitter is 100% efficient.

Many of the power supplies will put out the rated current with very little voltage drop, but the components seem not to be rated for continuous current. Several of the supplies I have tried will put out the rated current but if they are called to do it for a long time it is best to derate them. Some need it more than others. Some have a time limit on them as to how long you can draw the higher currents.

Myron A Calhoun wrote:
>
> kg4fet@aol.com (KG4FET) writes:
> >I need to stack 2 pwr supplies to supply my FT 100 with the proper current. My
> >AIM 20 is getting to hot for my tastes. I get full out of the radio but the
> >supply is way to hot if I do any rag chewing. I put a fan on it and that seems
> >
> >....[snip]....
>
> Others have responded well to your query about (generally not) paralleling
> power supplies.
>
> But no one questioned WHY your FT-100 is overloading a (presumably) 20-amp
> power supply. Even if the "20" is "max for a very short while", unless
> your "AMP 20" is really unusual, it ought to supply something like 13-15
> amps practically "forever". I've never owned an FT-100, but guessing
> it to be rated at about 250 watts PEP, or about 125 watts DC, it ought
> to need about 10 amps for the final plus a couple or three for the other
> circuitry. Unless you have a speech processor driving it like mad, or
> unless your "rag chewing" is actually RTTY, I'm surprised that your
> power supply can't handle that demand.
>
>

615. Re: OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Brian Hill <jonnysocko@jps.net>
Message-ID: <388a8150_1@news.jps.net>
Source record: 63922

Hi Al. One can 20uf x4 450V
73 Brian

Al, N2NKB wrote in message <86dolt$le9$1@bgtnsc01.worldnet.att.net>...
>
>Brian Hill wrote in message <388a61c4_2@news.jps.net>...
>>Need 20mfd x 4 450v .
>>Thanks
>>73 Brian
>>
>>Brians Radio Universe
>>http://www.jps.net/jonnysocko
>>
>One "can" or discretes?
>Al
>
>

616. Info/Manal for Singer CSM-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Rob Dunn <dunnr@ix.netcom.com>
Message-ID: <86e8di$7rj$1@nntp4.atl.mindspring.net>
Source record: 63923
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hi All,

I have an opportunity to purchase a Singer CSM-1 Service Monitor. Looks like it may be a useful tool but there is no manual. Anybody have a manual that they would like to part with or offer up to allow me to make a copy? Anybody that has experience with the CSM-1and can provide me some information on it I would appreciate it.

As always, thanks for the help!

Rob

617. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: danderso@inlandnet.net
Message-ID: <38896042.1435834@news.inlandnet.net>
Source record: 63924

Thanks, Allen...I hadn't thought of that!
Don
On Fri, 21 Jan 2000 15:11:42 GMT, Allan Dobler
<Allan.Dobler@crha-health.ab.ca> wrote:

>Head off to your local 2 way shop with your project and a case of
>Budwieser. I am sure a radio tech there will help you set up his service
>monitor to align your rx.
>Allan
>
>Don Anderson wrote:
>
>> I need a schematic for a simple transmitter. The frequency range
>> needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
>> see if my weather satellite receiver is detecting any signal at all.
>> Thanks!
>> Don
>> danderso@inlandnet.net
>

618. Re: WTB UHF MITREK parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Karl Shoemaker <kshoe@juno.com>
Message-ID: <388A05C4.7D66@juno.com>
Source record: 64041

Also onelist.com, under repeater-builders might be of help
Karl
--
Karl Shoemaker
kshoe@juno.com
http://www.dalek.org/srg

619. Re: help w/duplexer specs plz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: Karl Shoemaker <kshoe@juno.com>
Message-ID: <388A057D.D8E@juno.com>
Source record: 64042
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

Might check on onelist.com under repeater-builders reflector
--
Karl Shoemaker
kshoe@juno.com
http://www.dalek.org/srg

620. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-22 00:00:00 UTC
From: brians@opus.hpl.hp.com
Message-ID: <86asv9jlh1@hplms2.hpl.hp.com>
Source record: 64043

It's somewhat painful to simulate an entire PLL with SPICE,
so many people will simulate the circuit blocks individually
and then analyze the full loop behavior with a mathematical
model. I suspect that a SPICE macromodel will be difficult
to find.

There's a book you might want to check out:

The Design of CMOS Radio-Frequency Integrated Circuits by
Thomas H. Lee. This book has an excellent chapter on PLL's
with an extensive section on PLL design examples
that covers the 4046 PLL in great detail.

-Brian Setterberg

JW (jdwalton@home.com) wrote:
: I have been searching in vain for a SPICE model for the 4046 PLL, anyone
: care to point me in the right direction?

621. NEW Email List for finding Ham Auctions-Easy

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <86gf68$5pj$1@ns2.foothill.net>
Source record: 63795

A LIST is now set up for the posting of "AUCTIONS" for
HAM related items (NOT TUBE era stuff). For our purposes,
"Auctions" mean items listed for sale without fixed prices.
Postings may be as simple as "$150 obo", or formal auction
terms, or the announcement of a URL at which there is an
auction (e.g. an eBay address, etc.).
"HAM" does NOT include audiophile gear, tubes or parts,
or CB stuff except linears actually tuned to only Ham Bands.

Not only are there notices of URL's of internet commercial
auctions, but also one can post their own auction. A
suggested form is even available for preparing one's own
auction and can be found at:
http://www.egroups.com/group/ham-auctions/7.html?

Subscribers have the choices of:
1. Receiving each email posted by each subscriber.
2. Receiving all emails once each day in one message.
3. Receiving a digest once each day of just the "subjects"
and "authors" of each message.
4. Receiving no emails. but allowing subscriber to go to
egroups.com and selecting this LIST
"ham-auctions@egroups.com" and then
selecting which messages to view by "subject"

To subscribe
SEND TO: ham-auctions-subscribe@egroups.com
Note: Plural "auctions" and "egroups"

RULES will be simple:
Post for HAM related items only, for which firm prices are
NOT stated. Not for tube era gear, another LIST
has been set up for that.
NO radio program tapes, magazine cut-out ads, CB stuff
(except linears tuned to Ham Bands), or tubes or
parts for the audiophile market.
Please refrain from claiming something is "rare" unless
certain almost anyone would consider it rare.
Post only once for each auction. (No followup messages)
PLAIN simple TEXT ONLY. (Not even a background color)
Use descriptive "Subject" headings.
Include closing dates where appropriate

To change the mode by which you receive messages
(Every message, all messages at once daily, all message headings only once
daily, or go to egroups.com and select messages to read)

GO TO: http://www.egroups.com
SELECT: "My Space" button
Then SELECT the group for which you wish to change
your mode of receiving messages.
SELECT: "Group Info" button on bar.
SELECT: "Modify Subscription" button at bottom page.
Then make the changes.
SELECT: "Apply Changes" button

FOR THE NEXT FEW DAYS (after 1/22/00) emails may
contain some advertising. That should end when egroups
receives my check, which has bneen mailed.

THIS MESSAGE MAY BE FREELY COPIED AND
REPOSTED in its entirety.

Eugene Rippen

622. Re: Standard 10GHz WBFM frequency and polarization?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <ALPi4.58992$905.1200661@news5.giganews.com>
Source record: 63796

According to the 10 GHz building block book published by WB6IGP, it's suggested the frequency is set plus or minus 30 MHz of 10.250 MHz. However undoubtedly it would be wise to coordinate the frequency scheme with the other local operators!

73 de Jack

William Blair wrote in message
<388bb4a0.18429269@netnews.worldnet.att.net>...
>I haven't been able to find confirmation of this in any one place,
>but from putting all I've read together, am I correct in saying
>that an unofficial standard for 10GHz WBFM activity in the US is
>10.250/10.280GHz, 30MHz IF, vertical polarization? If not, are
>there any other accepted standards?
>
>Thanks,
>Bill Blair
>Cheyenne, WY
>
>==========
>"Tyrants would distribute largess, a bushel of wheat, a gallon of wine ...
and then everybody
>would shamelessly cry, 'Long live the King!' The fools did not realize that
they were merely
>recovering a portion of their own property, and that their ruler could not
have given them what
>they were receiving without having first taken it from them."
> -- Etienne de la Boetie, "Discourse on
Voluntary Servitude," 1577
>==========

623. Re: FA: Collis Mechanical Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <clin8scc3d9sn2co54q9a8f9shn5fvnang@4ax.com>
Source record: 63797
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

"Joe Schreiber" <jschreiber@adelphia.net>
shared these priceless pearls of wisdom:

->Model F455Q6... for 455 kHz IF... I believe it has a 6 kHz passband (+/- 3
->kHz)... ideal for AM reception... I put it in a radio and it works fine.

What the hell does this have to do with homebrewing?

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

624. Re: FS: KLM 140w 2M amp - $100

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <sjin8s4odbvrnuih2vet9koho4d6jrr2ip@4ax.com>
Source record: 63798

sims@sauron.msfc.nasa.gov (Herb Sims)
shared these priceless pearls of wisdom:

->For sale: KLM 140W 2M amplfiier. 25W in gets you 150W out. $100 plus
shipping.

What the hell does this have to do with homebrewing?

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

625. Re: FA: Collis Mechanical Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Radioz <r@ad.ioz>
Message-ID: <388BE557.776E8074@ad.ioz>
Source record: 63799
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Well, believe it or not some people do put filters in home built receivers. But perhaps you'd rather complain than think a bit.

Jim Weir wrote:

> ->Model F455Q6... for 455 kHz IF... I believe it has a 6 kHz passband (+/- 3
> ->kHz)... ideal for AM reception... I put it in a radio and it works fine.
>
> What the hell does this have to do with homebrewing?
>
> Jim
> Jim Weir, VP Eng. RST Eng. WX6RST

626. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <388a06a6.259284337@news.online.no>
Source record: 63925
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

indeed, the twin-lead has higher impedance

627. FS; 4-400A, 6146W, & 1964 ARL Handbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: "S. Reidp" <sreidp@hotmail.com>
Message-ID: <Ljui4.828$pa6.27818@sodalite.nbnet.nb.ca>
Source record: 63926
Cross-posted to: alt.ham-radio.marketplace,misc.industry.electronics.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

The following new tubes for sale:

Eimac 4-400A (JAN8438); $200US pair.

Phillips 6146W; $25US pair

Also, a 1964 Radio Amateur's Handbook, good to very good condition; $20

Shipping not included.

Thanks.

sreidp@hotmail.com

628. 50 MHz DX Bulletin (#00-003)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: "O. Bj&#65533;rn Madsen" <obm@image.dk>
Message-ID: <deui4.1441$E4.43309@news010.image.dk>
Source record: 63927
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

Dr OM/YL

This mail to inform You that the latest edition
of the OZ50MHz DX Bulletin #00-003 is now uploaded
at my website, at the adress;

http://www.qsl.net/oz6om/

Please have in mind that the OZ50MHz DX Bulletin
normaly is uploaded late Saturday evening (UT time)

vy 73 de OZ6OM / OZ7M "Matt"

629. Help - Yaesu FT707 part needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: renfredm@bigfoot.com
Message-ID: <388aee92.2899710@news.xtra.co.nz>
Source record: 63928

Hi,
I am trying to obtain an MSM9520 LSI counter chip for my Yaesu
Ft707. The agents here and in the US state that the chip has not been
manufactured for the last 2years and have no stocks. Any ideas or
possible stockists would be appreciated.
Thanks, Renfred...ZL1BDL

630. TUBES...TUBES...TUBES...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <86errc$12u$1@ruby.mint.net>
Source record: 63929

THOUSANDS OF TUBES FOR SALE.
gbrown@mint.net
THANK YOU
GARY

631. PARTING OUT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <86erua$13i$1@ruby.mint.net>
Source record: 63930

HEATHKIT
DX-40
DX-100
VHF-1 SENECA

HAMMERLUND
HQ-180

HALLICRAFTERS
S-40A

NATIONAL
NCX-3

gbrown@mint.net
THANK YOU
GARY

632. KW 440 & 850 control software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Major Ron <majrabsr@rconnect.com>
Message-ID: <s8m27t3ceh636@corp.supernews.com>
Source record: 63931

I am looking for software to control my Kenwood TS-440 SAT & TS-850 SAT
from my computer. Anyone know where to locate this software for download?

TIA & 73,
Ron, KA9ALC

633. Re: SAW question....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Jeff Patterson <jpat@bolt.sonic.net>
Message-ID: <_oFi4.1809$6d.20199@typhoon.sonic.net>
Source record: 63932

Paul Breed <Paul@rasdoc.com> wrote:
: I know that you can pull crystal oscilators +/-50ppm.

: Can you pull SAW oscilators?

Sure, any oscillator can be pulled. This is because the the oscillaor oscillates at the frequency where the phase shift around the loop that includes the feedback path is zero (or some multiple of 2*Pi radians). Induce a phase shift and the oscillator will react by changing frequency to restore the zero phase requirement, assuming it has enough excess gain to overcome any excess loss at that frequency.

: If so, how?

How far you can pull the oscillator depends on a number of inter-related factors including the _loaded_ Q of the resonator, the motional capacitance of the resonator (inversely related to the unload Q) and the excess gain. If you plotted the phase shift through the resonator vs. frequency it would look like __
\
\

The slope through resonance is proportional to the loaded Q of the resonator. So one way to pull it is with a varactor in series with an inductance which resonates the varactors capacitance at the operating frequency. This ciruit in series with the resonator can induce a positive or negative phase shift depending on whether your phase shifter looks net inductive or capacitive. The smaller the capacitance, the farther you can pull the device because the net reactance appears in series with the small motional capacitance of the resonator.

SAW's have lower Q than xtals so you should have an easier time of it. Don't forget to resonate the SAW's rather large (5 pF or so) IDT capacitance with appropriate inductors from any non-grounded SAW input pin to ground. I ususally use one of these inductors as the return for the varactor bias.

: I'm looking at building a very simple one transistor transmitter for
: finding lost RC aircaft.

: I have a schematic for a one transistor SAW resonator on 433.92 Mhz.
: It uses a panasonic SAW device. I'd like to induce a steady 1Khz FM
: tone so that it can be tracked with a cheap scanner, or 70cm HT.

You should have no trouble. The loaed Q of most SAW osc. at your frequency ends up being in the 1-2K region, giving a BW (assuming perfect centering) of saw 300 kHz. Remember though that its the deviation, not the rate in

FM which determines the depth of modulation.

One final question. Why bother with modualtion at all? Just crank down the squelch and look for the carrier.

Jeff

: Paul

--
Jeff Patterson
Site Administrator
The Melanoma Patients' Information Page
http://www.mpip.org/

634. Need Source for 5V VCO's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <388B2B38.A6600034@Rasdoc.com>
Source record: 63933

Anyone know of a source for 3 or 5V VCO's?
The Minicircuits VCO's are mostly 12V devices.

Paul (Kl7JG)

635. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <z_Fi4.48857$475.1144904@news4.giganews.com>
Source record: 63934

Most lamps in ham gear are rated for 'standard' automotive service, and will not last long at 13.8 Volts. And every piece of ham gear I have seen in the past several years works perfectly at 12.5 Volts. And lasts longer.

Check the specifications on your rig and you'll see that 12.5 Volts is well within the range, and does reduce stress greatly. Lamps are the most sensitive to this, but all those little regulators will run cooler and the finals will last longer too.

73, Bob

636. Source for 900Mhz divide by 2 prescaler.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <388B2D75.B51C142F@Rasdoc.com>
Source record: 63935

Maxim has a cool integrated 900Mhz MAX2622 VCO.
It runs from 855 to 881 Mhz in a microscopic package.
If I could find a divide by 2 prescaler that runs this fast it would
make
a really neat 70cm source.

I can find lots of divide by 8, but no divide by 2's.

Paul

637. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: kg4fet@aol.com
Message-ID: <20000123123144.03670.00001196@ng-fu1.aol.com>
Source record: 63936

>Myron A Calhoun wrote:

>But no one questioned WHY your FT-100 is overloading a (presumably) 20-amp
>> power supply. Even if the "20" is "max for a very short while", unless
>> your "AMP 20" is really unusual, it ought to supply something like 13-15
>> amps practically "forever". I've never owned an FT-100, but guessing
>> it to be rated at about 250 watts PEP, or about 125 watts DC, it ought
>> to need about 10 amps for the final plus a couple or three for the other
>> circuitry. Unless you have a speech processor driving it like mad, or
>> unless your "rag chewing" is actually RTTY, I'm surprised that your
>> power supply can't handle that demand

My concern is this. At full out on 6 meters (100watts) the voltage drop from My main supply is tremendous. At full out voltage will drop from13.98 to 11.4. It is not a problem on the higher frequencies where the radio will do 50 watts(144) and 20 watts (440). With the supplies stacked I do get less voltage drop(14 down to 13.1). While checking it out today I noticed that the fans on the Ft-100 will reduce RPM's as well. This is a bad thing. SWR's on My 6 meter Dipole are low through the full 4 mgs of the 6 meter band (below 1.5). Radio calls for 20 amp constant and the AIM is 17 amp constant 20 surge. This would come close to explaining why I need to do something like this.
Thanks For all of the responces I have recieved and i look forward to continuing this thread.
Thanks Again
Sandor KG4FET

638. Re: Source for 900Mhz divide by 2 prescaler.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <86fe1m$5aoj1$1@rn.area.com>
Source record: 63937

In article <388B2D75.B51C142F@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com> wrote:
>Maxim has a cool integrated 900Mhz MAX2622 VCO.
>It runs from 855 to 881 Mhz in a microscopic package.
>If I could find a divide by 2 prescaler that runs this fast it would
>make
>a really neat 70cm source.
>
>I can find lots of divide by 8, but no divide by 2's.
>
>Paul

The NEC UPB581 is a divide by 2 that goes to over 2 GHZ and has
been available for over 15 years and costs less than a buck.
You can also use a Mot Eclinps flip flop to do this. Just connect
Q-bar to D and clock it.

Rick Karlquist N6RK

639. FS: large toroids, RF and High Voltage components

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: bw201@torfree.net
Message-ID: <Fosuqu.36G.0.queen@torfree.net>
Source record: 63938
Cross-posted to: rec.radio.swap,alt.ham-radio.marketplace,rec.radio.amateur.homebrew,alt.electronics

Reduced prices and improved, much easier to read format.
http://www3.sympatico.ca/aquariusr/sale1.htm

A friend has set up a web site for me to sell off a 28 year accumulation
of electronic components including:
Coaxial Power switch,
RF power and other transistors, RF I.C.'s,
1N3712 Tunnel diodes,
1N5711 Schottky diodes,
Ceramic 455kHz and 10.7MHz filters,
Minicircuits mixers,
variable capacitors, both panel mount shaft type and trimmer
variable inductors and coil forms,
High voltage vacuum relays, rectifiers, resistors and capacitors,
Other capacitors including, Photoflash, polypropylenes, and tantulums,
Switches, such as foot switches and industrial limit (micro) switches,
Ferrites beads, toroids, large E cores, etc.
Transformers and inductors,
and lots, lots more.

Bob Levitt

640. Re: VolksRTTY II QST Project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <UWHi4.208136$5r2.567449@tor-nn1.netcom.ca>
Source record: 63939

Just go to the unofficial HAMCOMM web site of the author of the article for the VOLKS RTTY II. The URL is http://home.att.net/~k7szl/

Schematic, etc on the VOLKS RTTY II can be found there. K7SZL even sells kits.

Another approach is to build the original HAMCOMM interface and put a good RTTY audio filter in front if it. (Or a good SSB audio filter with adjustable highpass and lowpass filters). Audio filters are easy to pick up at HAMFESTS at a low prices. I like using the original HAMCOMM interface with an SSB audio filter in front of it since this combination can also be used NOT ONLY for RTTY and AMTOR BUT ALSO for SSTV (with mainly SSTV programs like EZSSTV and JVFAX).

If you want to use the VOLKS RTTY II mainly for PACTOR, you should really consider using a different modem -- the AN-93 modem which has a A/D chip for true hardware memory ARQ.

73's
Rob
VA2FB

"Doug Snowden" <dsnowden@ncdc.noaa.gov> wrote in message news:3888C70A.A63B12F5@ncdc.noaa.gov...
> Anyone got a copy (or make a copy) of this for me?
> I tossed my mags. I think it was in OCT-NOV 99 QST ? I'll pay for copy
> of course.
>
> Doug N4IJ
> dsnowden@ncdc.noaa.gov
>
>

641. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: MICHELE FREEDMAN <Luppy1961@email.msn.com>
Message-ID: <uW#xxseZ$GA.248@cpmsnbbsa02>
Source record: 63940
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Maybe you can't read? This ng is for amateur radio. go find the proper
place for your post.

<news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
wrote in message
news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
> My name is Darren Mulligan and I am an aspiring photographer from
California.
> I will get right to the meat and gravy of this post, so as not to waste
your time!
>
> +++++WHAT AM I SEEKING?+++++
>
> I am looking for young models (prefer early teen 14-16 year old female)
for nude and semi-nude photography. This is a great way for me to update my
portfolio, and also a great way for you to get a free portfolio, too! This
could lead to employment in the Adult XXX entertainment business. What a
great way to make money!
>
> Please respond to one of the following e-mail addresses. I run my very own
mail server on an ADSL connection so you can be assured to complete
discretion and privacy. If one e-mail address does not work, simply try the
next!
>
> Sorry for the long list! My ADSL connection goes down from time to time,
so I posted all the e-mail addresses I can be reached at. If one does not
work, just move on to the next!
>
> nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
> hostmaster@FREESERVERS.COM
>
> THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
> There is nothing wrong or illegal about the artistic representation of a
young body. If you have a problem with this post, please e-mail me and I
will not post to your newsgroup again!
>
> Sincerely,
> Darren Mulligan

>

642. Interfacing to portable phones

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Robin Birch <robin@falstaf.demon.co.uk>
Message-ID: <X$EcaHAAa3i4Ew5L@falstaf.demon.co.uk>
Source record: 63941

Dear All,
Can anyone point me at the specs for the accessory interfaces for
different types of mobile phones. I am trying to build a system whihc
will dial a number and then transmit some speech and I would like to do
it using the interface to the phone rather than knife and forking the
phone.

Regards

Robin

--
Robin Birch robin@falstaf.demon.co.uk

M1ASU/2E0ARJ/M5ABD Old computers and radios always welcome

643. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Bill Gallagher <KS3Y@prodigy.net>
Message-ID: <86geu2$39b0$1@newssvr04-int.news.prodigy.com>
Source record: 63942
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Maybe he's confused by all the new 'digital' modes?

MICHELE FREEDMAN <Luppy1961@email.msn.com> wrote in message
news:uW#xxseZ$GA.248@cpmsnbbsa02...
> Maybe you can't read? This ng is for amateur radio. go find the proper
> place for your post.
>
>
>
> <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
> wrote in message
> news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
> > My name is Darren Mulligan and I am an aspiring photographer from
> California.
> >
> > Sincerely,
> > Darren Mulligan
> >
>
>

644. NEW Email List for finding boatanchor auctions - Easy

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-23 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <86gf92$5ps$1@ns2.foothill.net>
Source record: 63943

NEW EMAIL LIST is now set up for the posting of
notices of "AUCTIONS" for tube era items..

Not only are there notices of URL's of internet commercial
auctions, but also one can post their own auction. A
suggested form is even available for preparing one's own
auction and can be found at:
http://www.egroups.com/group/boatanchor-auctions/8.html?

For "boatanchor" related items. For our purposes, "Auctions"
mean items listed for sale without fixed prices. Postings
may be as simple as "$150 obo", or formal auction terms,
or the announcement of a URL at which there is an auction
(e.g. an eBay address, etc.).
"Boatanchor" may include old tube type broadcast radio stuff,
but not recent audio gear, tubes or parts.

Subscribers have the choices of:
1. Receiving each email posted by each subscriber.
2. Receiving all emails once each day in one message.
3. Receiving a digest once each day of just the "subjects"
and "authors" of each message.
4. Receiving no emails. but allowing subscriber to go to
egroups.com and selecting this LIST
"boatanchor-auctions@egroups.com" and then
selecting which messages to view by "subject"

To subscribe to boatanchor auctions list
SEND boatanchor-auctions-subscribe@egroups.com
Note: Singular "boatanchor. Plural, "auctions' and
"egroups"

RULES will be simple:
Post for tube era related items only, for which firm prices are
NOT stated.
NO radio program tapes, magazine cut-out ads, CB stuff
(except linears tuned to Ham Bands), or tubes or
parts for the audiophile market.
Please refrain from claiming something is "rare" unless
certain almost anyone would consider it rare.
Post only once for each auction. (No followup messages)
PLAIN simple TEXT ONLY. (Not even a background color)
Use descriptive "Subject" headings.
Include closing dates where appropriate

FOR THE NEXT FEW DAYS (after 1/22/00) emails may
contain some advertising. That should end when egroups
receives my check, which has been mailed.

To change the mode by which you receive messages
(Every message, all messages at once daily, all message
headings only once daily, or go to egroups.com and select
messages to read)
GO TO: http://www.egroups.com
SELECT: "My Space" button
Then SELECT the group for which you wish to change
your mode of receiving messages.
SELECT: "Group Info" button on bar.
SELECT: "Modify Subscription" button at bottom page.
Then make the changes.
SELECT: "Apply Changes" button

THIS MESSAGE MAY BE FREELY COPIED AND
REPOSTED in its entirety.

Eugene Rippen

645. Standard 10GHz WBFM frequency and polarization?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: wbbblair@worldnet.att.net
Message-ID: <388bb4a0.18429269@netnews.worldnet.att.net>
Source record: 63800

I haven't been able to find confirmation of this in any one place,
but from putting all I've read together, am I correct in saying
that an unofficial standard for 10GHz WBFM activity in the US is
10.250/10.280GHz, 30MHz IF, vertical polarization? If not, are
there any other accepted standards?

Thanks,
Bill Blair
Cheyenne, WY

==========
"Tyrants would distribute largess, a bushel of wheat, a gallon of wine ... and then everybody
would shamelessly cry, 'Long live the King!' The fools did not realize that they were merely
recovering a portion of their own property, and that their ruler could not have given them what
they were receiving without having first taken it from them."
-- Etienne de la Boetie, "Discourse on Voluntary Servitude," 1577
==========

646. Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <grQi4.3344$pU.528368@typhoon1.gnilink.net>
Source record: 63801

Does anyone know why the conductor in teflon insulated wire is invariably silver-plated?

Ed, K3FDY.

647. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: "Mike S. [VK4NM]" <vk4nm@hotmail.com>
Message-ID: <nuXi4.9606$3b6.44354@ozemail.com.au>
Source record: 63802
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Another proof why we should NEVER abandon CW requirement. . It filters
things like this. Once you allow CBers on HF this is what's gonna happen.
Well not exactly the same, but kind of ...)

73 Mike VK4NM

"MICHELE FREEDMAN" <Luppy1961@email.msn.com> wrote in message
news:uW#xxseZ$GA.248@cpmsnbbsa02...
> Maybe you can't read? This ng is for amateur radio. go find the proper
> place for your post.
>
>
>
> <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
> wrote in message
> news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
> > My name is Darren Mulligan and I am an aspiring photographer from
> California.
> > I will get right to the meat and gravy of this post, so as not to waste
> your time!
> >
> > +++++WHAT AM I SEEKING?+++++
> >
> > I am looking for young models (prefer early teen 14-16 year old female)
> for nude and semi-nude photography. This is a great way for me to update
my
> portfolio, and also a great way for you to get a free portfolio, too! This
> could lead to employment in the Adult XXX entertainment business. What a
> great way to make money!
> >
> > Please respond to one of the following e-mail addresses. I run my very
own
> mail server on an ADSL connection so you can be assured to complete
> discretion and privacy. If one e-mail address does not work, simply try
the
> next!
> >
> > Sorry for the long list! My ADSL connection goes down from time to time,
> so I posted all the e-mail addresses I can be reached at. If one does not
> work, just move on to the next!
> >
> > nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net

> > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
> > hostmaster@FREESERVERS.COM
> >
> > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
> > There is nothing wrong or illegal about the artistic representation of a
> young body. If you have a problem with this post, please e-mail me and I
> will not post to your newsgroup again!
> >
> > Sincerely,
> > Darren Mulligan
> >
>
>

648. Re: OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <388C3A78.9B28F04C@cmcorp.com>
Source record: 63803

Brian Hill wrote:

> Need 20mfd x 4 450v .
> Thanks
> 73 Brian
>
> Brians Radio Universe
> http://www.jps.net/jonnysocko

Sorry!
I don't seem to have any 4 section caps...
But if it will help, see my inventory:

http://hamradio.cmcorp.com/inventory/CAPACITORS/Multi_Section.html

--
Thomas C. Sefranek WA1RHP
ARRL Instructor, Technical Specialist, VE Contact.
http://www.harvardrepeater.org
http://hamradio.cmcorp.com/inventory/Inventory.html

649. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: craiggib@deathtojunkmail.icon.co.za
Message-ID: <388c4dd0.4401708@news.icon.co.za>
Source record: 63804

I want to be a SPICE model...

650. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Brent Walton <kf6fgb@pacbell.net>
Message-ID: <388C5537.635219AE@pacbell.net>
Source record: 63805
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I beg to differ. This is a reason why people accessing the Internet should have to have passed an exam and screening.

I'd like to see the look on this guys face when the judge explains to him that it IS illeagal to take pictures of minors in the nude.

73,
Brent

"Mike S. [VK4NM]" wrote:

> Another proof why we should NEVER abandon CW requirement. . It filters
> things like this. Once you allow CBers on HF this is what's gonna happen.
> Well not exactly the same, but kind of ...)
>
> 73 Mike VK4NM
>
> "MICHELE FREEDMAN" <Luppy1961@email.msn.com> wrote in message
> news:uW#xxseZ$GA.248@cpmsnbbsa02...
> > Maybe you can't read? This ng is for amateur radio. go find the proper
> > place for your post.
> >
> >
> >
> > <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
> > wrote in message
> > news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
> > > My name is Darren Mulligan and I am an aspiring photographer from
> > California.
> > > I will get right to the meat and gravy of this post, so as not to waste
> > your time!
> > >
> > > +++++WHAT AM I SEEKING?+++++
> > >
> > > I am looking for young models (prefer early teen 14-16 year old female)
> > for nude and semi-nude photography. This is a great way for me to update
> my
> > portfolio, and also a great way for you to get a free portfolio, too! This
> > could lead to employment in the Adult XXX entertainment business. What a
> > great way to make money!
> > >
> > > Please respond to one of the following e-mail addresses. I run my very
> own
> > mail server on an ADSL connection so you can be assured to complete

> > discretion and privacy. If one e-mail address does not work, simply try
> the
> > next!
> > >
> > > Sorry for the long list! My ADSL connection goes down from time to time,
> > so I posted all the e-mail addresses I can be reached at. If one does not
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> > > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
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> > >
> > > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
> > > There is nothing wrong or illegal about the artistic representation of a
> > young body. If you have a problem with this post, please e-mail me and I
> > will not post to your newsgroup again!
> > >
> > > Sincerely,
> > > Darren Mulligan
> > >
> >
> >

651. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Brent Walton <kf6fgb@pacbell.net>
Message-ID: <388C5612.442CFA47@pacbell.net>
Source record: 63806
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

You wrote:
"THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
There is nothing wrong or illegal about the artistic representation of a young body. If you have a problem with this post, please e-mail me and I will not post to your newsgroup again!"

Oh, on the contrary, keep on posting. We want to make sure the authorities contact you so they can lock you up in Folsom. By the way, why don't you post your phone number too?

news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net wrote:

> My name is Darren Mulligan and I am an aspiring photographer from California.
> I will get right to the meat and gravy of this post, so as not to waste your time!
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> usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
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> Sincerely,
> Darren Mulligan

652. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <388c51b3.2265222@news.thegrid.net>
Source record: 63807
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Who is allowing CB'ers on HF?

On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
<vk4nm@hotmail.com> wrote:

>Another proof why we should NEVER abandon CW requirement. . It filters
>things like this. Once you allow CBers on HF this is what's gonna happen.
> Well not exactly the same, but kind of ...)
>
>73 Mike VK4NM
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>> <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
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>> great way to make money!
>> >
>> > Please respond to one of the following e-mail addresses. I run my very
>own
>> mail server on an ADSL connection so you can be assured to complete
>> discretion and privacy. If one e-mail address does not work, simply try
>the
>> next!
>> >

>> > Sorry for the long list! My ADSL connection goes down from time to time,
>> so I posted all the e-mail addresses I can be reached at. If one does not
>> work, just move on to the next!
>> >
>> > nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
>> > hostmaster@FREESERVERS.COM
>> >
>> > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
>> > There is nothing wrong or illegal about the artistic representation of a
>> young body. If you have a problem with this post, please e-mail me and I
>> will not post to your newsgroup again!
>> >
>> > Sincerely,
>> > Darren Mulligan
>> >
>>
>>
>
>

http://www.qsl.net/kf6foz/

653. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-1C126A.09591724012000@news.erols.com>
Source record: 63808
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Figure the odds of finding young girls in an amateur radio ng! HA!

In article <388C5612.442CFA47@pacbell.net>, Brent Walton
<kf6fgb@pacbell.net> wrote:

> You wrote:
> "THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
> There is nothing wrong or illegal about the artistic representation of a
> young body. If you have a problem with this post, please e-mail me and I
> will not post to your newsgroup again!"
>
> Oh, on the contrary, keep on posting. We want to make sure the
> authorities contact you so they can lock you up in Folsom. By the way,
> why don't you post your phone number too?
>
>
> news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> wrote:
>
> > My name is Darren Mulligan and I am an aspiring photographer from
> > California.
> > I will get right to the meat and gravy of this post, so as not to waste
> > your time!
> >
> > +++++WHAT AM I SEEKING?+++++
> >
> > I am looking for young models (prefer early teen 14-16 year old female)
> > for nude and semi-nude photography. This is a great way for me to
> > update my portfolio, and also a great way for you to get a free
> > portfolio, too! This could lead to employment in the Adult XXX
> > entertainment business. What a great way to make money!
> >
> > Please respond to one of the following e-mail addresses. I run my very
> > own mail server on an ADSL connection so you can be assured to complete
> > discretion and privacy. If one e-mail address does not work, simply try
> > the next!
> >
> > Sorry for the long list! My ADSL connection goes down from time to
> > time, so I posted all the e-mail addresses I can be reached at. If one
> > does not work, just move on to the next!
> >
> > nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net

> > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
> > hostmaster@FREESERVERS.COM
> >
> > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
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> > a young body. If you have a problem with this post, please e-mail me
> > and I will not post to your newsgroup again!
> >
> > Sincerely,
> > Darren Mulligan
>

654. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: JJ <jj@no.net>
Message-ID: <381EF0A2.1BEB@no.net>
Source record: 63809
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

MICHELE FREEDMAN wrote:
>
> Maybe you can't read? This ng is for amateur radio. go find the proper
> place for your post.

It does no good to post and answer to spam in a newsgroup. Spammers post their spam to hundres of newsgroups and they never see any reply messages. You need to complain directly to the hosting site.

655. homebrew qrp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: kd5fxt@aol.com
Message-ID: <20000124100824.00361.00000033@ng-ch1.aol.com>
Source record: 63810

I would like to build a homebrew qrp from "scratch"... any resources or info would be greatly appreciated. Pse email info.

tnx
Bill

656. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: chipster66@hotmail.com
Message-ID: <388d6d67.12030045@news.usol.com>
Source record: 63811
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Mon, 24 Jan 2000 05:35:52 -0800, Brent Walton <kf6fgb@pacbell.net>
wrote:

>I beg to differ. This is a reason why people accessing the Internet should have
>to have passed an exam and screening.
>
>I'd like to see the look on this guys face when the judge explains to him that
>it IS illeagal to take pictures of minors in the nude.

Wait till he finds out that 14 will get him 20 !!

>73,
>Brent
>
>"Mike S. [VK4NM]" wrote:
>
>> Another proof why we should NEVER abandon CW requirement. . It filters
>> things like this. Once you allow CBers on HF this is what's gonna happen.
>> Well not exactly the same, but kind of ...)
>>
>> 73 Mike VK4NM
>>
>> "MICHELE FREEDMAN" <Luppy1961@email.msn.com> wrote in message
>> news:uW#xxseZ$GA.248@cpmsnbbsa02...
>> > Maybe you can't read? This ng is for amateur radio. go find the proper
>> > place for your post.
>> >
>> >
>> >
>> > <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
>> > wrote in message
>> > news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
>> > > My name is Darren Mulligan and I am an aspiring photographer from
>> > California.
>> > > I will get right to the meat and gravy of this post, so as not to waste
>> > your time!
>> > >
>> > > +++++WHAT AM I SEEKING?+++++
>> > >
>> > > I am looking for young models (prefer early teen 14-16 year old female)
>> > for nude and semi-nude photography. This is a great way for me to update
>> my
>> > portfolio, and also a great way for you to get a free portfolio, too! This
>> > could lead to employment in the Adult XXX entertainment business. What a

>> > great way to make money!
>> > >
>> > > Please respond to one of the following e-mail addresses. I run my very
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>> > mail server on an ADSL connection so you can be assured to complete
>> > discretion and privacy. If one e-mail address does not work, simply try
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>> > next!
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>> > > Sorry for the long list! My ADSL connection goes down from time to time,
>> > so I posted all the e-mail addresses I can be reached at. If one does not
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>> > > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
>> > > hostmaster@FREESERVERS.COM
>> > >
>> > > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
>> > > There is nothing wrong or illegal about the artistic representation of a
>> > young body. If you have a problem with this post, please e-mail me and I
>> > will not post to your newsgroup again!
>> > >
>> > > Sincerely,
>> > > Darren Mulligan
>> > >
>> >
>> >

657. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Doug Smith <w9wi@bellsouth.net>
Message-ID: <388C6D34.C964EF04@bellsouth.net>
Source record: 63812
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Judging from the list of addresses embedded in here, it looks to me like
somebody has a beef with PacBell.net and is trying to harrass their
support lines by filling them with porn complaints. I don't think
there's any real porn going on here. It almost looks like the jerk got
shut down for spamming & isn't willing to pay the penalty.

He'll probably wish he had when the police show up at his door.
--
Doug Smith W9WI
Pleasant View (Nashville), TN EM66
http://personal.bellsouth.net/~w9wi
...
messages from domain "ari.net" will
be automatically killfiled until
they do something about a certain
skiing-related spam site...

658. Construction articles for solid-state amps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: hmilliken@my-deja.com
Message-ID: <86i406oqg1@nnrp1.deja.com>
Source record: 63813

Looking for any construction articles on building a high power solid-state HF linear. I have a 40v/60A power supply that is just begging to be used for something like this. :)

73,
Harry WB1FBN

Sent via Deja.com http://www.deja.com/
Before you buy.

659. FS: 1000's of Tubes, Books & Microwave Components

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <86i8jm$16u2$1@newssvr04-int.news.prodigy.com>
Source record: 63814
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

e-mail m.pasternack@prodigy.net for my 10 page list. Murray, W6KRC

660. Re: Need Source for 5V VCO's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: brians@opus.hpl.hp.com
Message-ID: <86ia3jqpo1@hplms2.hpl.hp.com>
Source record: 63815

You didn't specify a frequency range for the VCO,
but you might try Z-Communications...they have a
broad selection.

http://www.zcomm.com

-Brian

Paul Breed (Paul@Rasdoc.com) wrote:

: Anyone know of a source for 3 or 5V VCO's?
: The Minicircuits VCO's are mostly 12V devices.

: Paul (Kl7JG)

661. Re: Need Source for 5V VCO's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: brians@opus.hpl.hp.com
Message-ID: <86ianq$2aa$1@hplms2.hpl.hp.com>
Source record: 63816

Try Z-Communications.

http://www.zcomm.com

-Brian

Paul Breed (Paul@Rasdoc.com) wrote:

: Anyone know of a source for 3 or 5V VCO's?
: The Minicircuits VCO's are mostly 12V devices.

: Paul (Kl7JG)

662. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000124141144.19345A-100000@oso.slonet.org>
Source record: 63817

On Mon, 24 Jan 2000, K3FDY wrote:

> Does anyone know why the conductor in teflon insulated wire is invariably
> silver-plated?
>
> Ed, K3FDY.>

Probably because the cost of the teflon is so high silver plating
increases that cost just slightly. Then you have the best of all!

663. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000124141635.19345D-100000@oso.slonet.org>
Source record: 63818

Does anyone know the manufacturer and chip number of single chip FM receivers? The goal is to change the tuning range from 88 to 108 MHz to either the two meter band or ten meter band. Cliff K7RR

664. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: dana <dana@randomc.com>
Message-ID: <Pine.GSO.4.10.10001241807000.21651-100000@cluster2>
Source record: 63819
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

You can just stay in 1 news group, and read all the cross posts, i like
that idea!!

On Mon, 24 Jan 2000, Brent Walton wrote:

> Date: Mon, 24 Jan 2000 05:39:31 -0800
> From: Brent Walton <kf6fgb@pacbell.net>
> Newsgroups: rec.radio.amateur.dx, rec.radio.amateur.equipment,
> rec.radio.amateur.homebrew
> Subject: Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409
>
> You wrote:
> "THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
> There is nothing wrong or illegal about the artistic representation of a young body. If
you have a problem with this post, please e-mail me and I will not post to your newsgroup
again!"
>
> Oh, on the contrary, keep on posting. We want to make sure the authorities contact you so
they can lock you up in Folsom. By the way, why don't you post your phone number too?
>
>
> news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net wrote:
>
> > My name is Darren Mulligan and I am an aspiring photographer from California.
> > I will get right to the meat and gravy of this post, so as not to waste your time!
> >
> > +++++WHAT AM I SEEKING?+++++
> >
> > I am looking for young models (prefer early teen 14-16 year old female) for nude and
semi-nude photography. This is a great way for me to update my portfolio, and also a great
way for you to get a free portfolio, too! This could lead to employment in the Adult XXX
entertainment business. What a great way to make money!
> >
> > Please respond to one of the following e-mail addresses. I run my very own mail server
on an ADSL connection so you can be assured to complete discretion and privacy. If one
e-mail address does not work, simply try the next!
> >
> > Sorry for the long list! My ADSL connection goes down from time to time, so I posted
all the e-mail addresses I can be reached at. If one does not work, just move on to the
next!
> >
> > nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net

> > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
> > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
> > hostmaster@FREESERVERS.COM
> >
> > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
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> >
> > Sincerely,
> > Darren Mulligan
>
>
>

665. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: THE MICHAEL <nowhere@kenowhere.com>
Message-ID: <s8poe338eh640@corp.supernews.com>
Source record: 63820

You might want to try Motorola, NEC, and Plessey. These are just off the top
of my head and I know the first two have online data sheets.

Mike N9XYP

Clifford Buttschardt <cbuttsch@slonet.org> wrote in message
news:Pine.GSO.3.95.1000124141635.19345D-100000@oso.slonet.org...
> Does anyone know the manufacturer and chip number of single chip FM
> receivers? The goal is to change the tuning range from 88 to 108 MHz
> to either the two meter band or ten meter band. Cliff K7RR
>

666. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000124172537.11757C-100000@oso.slonet.org>
Source record: 63821

Yes I know of these manufacturers. I need specific information on chips
that hams can obtain. It is important to differentiate between hams and
the users of thousands of chips used in modern manufacturing. Cliff K7RR

On Mon, 24 Jan 2000, THE MICHAEL wrote:

> You might want to try Motorola, NEC, and Plessey. These are just off the top
> of my head and I know the first two have online data sheets.
>
> Mike N9XYP
>
>
> Clifford Buttschardt <cbuttsch@slonet.org> wrote in message
> news:Pine.GSO.3.95.1000124141635.19345D-100000@oso.slonet.org...
> > Does anyone know the manufacturer and chip number of single chip FM
> > receivers? The goal is to change the tuning range from 88 to 108 MHz
> > to either the two meter band or ten meter band. Cliff K7RR
> >
>
>
>
>

667. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: danderso@inlandnet.net
Message-ID: <388cd89e.3309985@news.inlandnet.net>
Source record: 63822

Dave,
Nope, I hadn't thought of that! I'm not real "RF-literate", so I
turn to you guys in this newsgroup when I need ideas, like this one.
Thanks!
Don

On 21 Jan 2000 00:29:34 -0800, davem@groucho.cs.ubc.ca (Dave
Martindale) wrote:

>danderso@inlandnet.net (Don Anderson) writes:
>>I need a schematic for a simple transmitter. The frequency range
>>needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
>>see if my weather satellite receiver is detecting any signal at all.
>
>You may have thought of this already, but:
>
>See if you can borrow a SWR measuring device like an Autek RF-5 or the
>MFJ equivalent. These contain a variable-frequency oscillator that
>can be adjusted over a wide frequency range plus a frequency counter.
>Attach a bit of wire to the output and you have a low-power transmitter,
>without building anything.
>
> Dave

668. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <388D13DB.D46F0E49@valley.net>
Source record: 63823

K3FDY wrote:

> Does anyone know why the conductor in teflon insulated wire is invariably
> silver-plated?
>
>

Hello--
Most Teflon-insulated hookup wire goes through an extrusion process, in which the Teflon
gets squeezed onto the outside of the wire to form the insulation. This occurs at a
temperature high enough to oxidize untinned copper or vaporize standard tinning. However,
silver resists the high temperature just fine, and as a bonus decreases skin-effect losses
to some degree.

Teflon wire is wonderful to work with-- it won't turn to mush when you touch it with a soldering
iron; however, it's more difficult to strip and crushes more easily than PVC insulation.
Modern-day IPVC (irradiated PVC) wire insulation works reasonably well and won't
melt as readily as older PVC.

73,
Brad AA1IP

669. Re: Test Equipment Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <388D129F.A2E3DD6E@valley.net>
Source record: 63824

BarryG wrote:

> If anyone can advise me of whether a Superior Instruments 650-A is a decent
> enough signal generator to do receiver alignment, I would appreciate it.
> I've been offered one as-is for $30 sight unseen, and am not familiar with
> the beast.
>
> Tnx & 73,
> Barry N1EU

Hello--

While I'm not directly familiar with the Superior 650, I can offer a few general

comments re: older tube-type signal generators.

Many will do fine if you allow an extended warmup interval and monitor the output
frequency with a counter, but resettability without a counter can be poor due to dial
"stiction" and mechanical hysteresis.

Older signal generators tend to leak RF like a sieve due to inadequate shielding

(sometimes curable by installing more screws through the front panel and into the
cabinet) and due to radiation from the AC power line.

Which brings up a major problem: frequently, both sides of the AC line get bypassed
to chassis "ground"-- this puts the signal generator's cabinet at half of AC line voltage,
albeit current-limited by the bypass capacitor's impedance at 60 Hz. The leakage

can cause a tingle if you touch the chassis and a grounded piece of equipment, or
even zap semiconductors.

If one of the AC-line bypass caps is shorted (not uncommon with
older-style paper caps), you have a dangerous instrument that can deliver a lethal
shock.

You can sometimes improve AC-line radiation by installing a modern-design EMI/RFI
AC line filter of appropriate rating and a three-wire power cord that grounds the chassis.

You may have to replace the power-supply filter capacitors in an older signal generator.
Depending on their size, rating and availability, this can add $10-$20 to the repair tab.
On the plus side, if you're going to rebuild an older signal generator as a working instrument,
you can use less-expensive single-section electrolytics instead of a harder-to-find
multisection can.

If you're unfamiliar with vacuum-tube instruments, I recommend buying only those that include
a manual or at minimum, a schematic diagram. As you gain experience, you can take
more chances.

Many older signal generators use a microphone connector as an RF output connector;
I don't like these and replace 'em with a BNC connector.

Most older signal generators are harmonic-rich, and this can cause confusion if you
tune up on a harmonic (but here, a counter helps). Modulation can consist of AM or
FM (depending on features) or a simultaneous combination (on older, cheaper sig gens)<g>.

73,
Brad AA1IP

670. Re: FA: Collis Mechanical Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: Ron Ostman <w0nyq@minntaccdp.com>
Message-ID: <86j833$15uu$1@news1.spacestar.net>
Source record: 63825
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

...another engineer opens mouth and inserts foot!

Ron, W0NYQ
Jim Weir wrote in message ...
>"Joe Schreiber" <jschreiber@adelphia.net>
>shared these priceless pearls of wisdom:
>
>->Model F455Q6... for 455 kHz IF... I believe it has a 6 kHz passband (+/-
3
>->kHz)... ideal for AM reception... I put it in a radio and it works fine.
>
>What the hell does this have to do with homebrewing?
>
>Jim
>Jim Weir, VP Eng. RST Eng. WX6RST
>A&P, CFI, and other good alphabet soup

671. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2401002252090001@dialup-1073.hip.cam.org>
Source record: 63826

In article <Pine.GSO.3.95.1000124141635.19345D-100000@oso.slonet.org>,
Clifford Buttschardt <cbuttsch@slonet.org> wrote:

> Does anyone know the manufacturer and chip number of single chip FM
> receivers? The goal is to change the tuning range from 88 to 108 MHz
> to either the two meter band or ten meter band. Cliff K7RR

But didn't you have an article in QST back in 1968 about this? It had an
FET in the mixer, and probably the RF stage, and was intended to go ahead
of an
FM broadcast receiver for reception of the then fairly new 2M FM.

I've always wondered how well that scheme worked. Probably activity
was low enough that the wide bandwidth wasn't a problem, but since
the FM radio was designed for wideband FM, the surely the recovered audio
was low.

The ezsiest solution would be to retune an FM broadcast receiver, which
of course you saw articles about back then. But if the bandwidth problem
was okay back then, I doubt it won't be a problem now.

So you'd have to change the filter to a narrow one, and fix the discriminator
to deal with narrow deviation.

At that point, of course, it's easier to build something from scratch, though
a broadcast receiver would probably be the easiest source of an IC.

Thirty years or so ago, there seemed to be a move to single conversion
for FM reception, with an IF of 10.7MHz. But I remember reading about
problems getting enough recovered audio with that IF, since the narrow
deviation is a fairly small percentage of the center frequency. And it
sure seems like most of the junk I pull apart uses a double conversion
scheme, with 10.7Mhz and then 455KHz.

Motorola makes ICs that do that. Originally, they had ICs that took
10.7Mhz and converted it to 455KHz, where the IF and limiter worked,
and then the discriminator in some form. An example would be the MC3357,
and there were variations that had somewhat different features, though
I have no idea of their availability now.

More recently, Motorola also had double conversion FM receiver ICs intended
for narrow band FM. The MC3362 would be an example from a 1990 databook.
Motorola has fancier ones in recent years, Communications Quarterly ran
some articles from Motorola about them, but besides getting them in
small quantities, I think they are all surface mount.

These are probably better choices than something intended for FM broadcast reception, since they are intended for narrow deviation, and a lot of ICs used in consumer equipment isn't readily available.

However, with a little scrounging the ICs and filters are fairly available. As I've said before, superhet 49MHz walkie talkies from Radio Shack (and elsewhere) use something like the Motorola IC's I've mentioned above. I have some which are a bit older, and they use a traditiional front end ahead of the MC3357. By now, the things might use the double conversion ICs. One could either rework the front end for another band, bypass the front end and just use the IF strip, or put an external converter ahead of it.

The same ICs and filters show up in cordless telephones. The really cheap ones seem to use the ICs as a single conversion receiver going directly to 455KHz (and I think I saw one that used an odd IC), but I've picked up broken expensive ones for almost nothing that have Motorola ICs and the needed filters. Plus, you get two of the IF strips each time you rescue a broken
cordless phone. You'd have to extract the IF strip, and put a front end ahead of it.

I haven't looked inside, but probably some baby monitors use the same ICs. I can't quite picture them using superregen receivers.

Cell phones have similar IF strips, though the ones I've seen have a first IF above 30MHz. The older ones are becoming available cheap, since nobody once something so builky.

Michael VE2BVW

672. Re: FA: Collis Mechanical Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-24 00:00:00 UTC
From: k6hm <k6hm@wenet.net>
Message-ID: <388D2BBF.D9FEFDC1@wenet.net>
Source record: 63827
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I don't know how Jim tested this filter for AM reception. It is 1.2 KHZ bandwidth filter not AM filter (FYI, Q5 is 0.5 KHZ CW filter, Q6 is 1.2 KHZ filter). It is O.K. for wide 850HZ Shift RTTY, not suitable even for SSB !
de K6hm

Radioz wrote:

> Well, believe it or not some people do put filters in home built receivers. But
> perhaps you'd rather complain than think a bit.
>
> Jim Weir wrote:
>
> > ->Model F455Q6... for 455 kHz IF... I believe it has a 6 kHz passband (+/- 3
> > ->kHz)... ideal for AM reception... I put it in a radio and it works fine.
> >
> > What the hell does this have to do with homebrewing?
> >
> > Jim
> > Jim Weir, VP Eng. RST Eng. WX6RST

673. Re: LF Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: dtees@my-deja.com
Message-ID: <86j91ckvi1@nnrp1.deja.com>
Source record: 63828

In article <386b5b86.153222371@news.io.com>,
maddog@io.com wrote:
> On Wed, 29 Dec 1999 18:03:44 -0500, charlie
<burnham@tiac.net> wrote:
>
> >I need ideas for a low power 1-2W AM
transmitter that operates around
> >300Khz.
>
> Just out of curiosity, what license or
regulatory permission was
> required for this application, and what process
did you have to go
> through to obtain it?
>
> monty
>
> Non Directional Radio Beacons for aircraft
navigation operate in this frequency range. They
typically put out about 25 to 50 watts. If you
get your transmitter going be sure and check an
aircraft sectional chart in your area to make sure
you're not interfering with an NDB station in your
area, otherwise, on a dark an rainy night you may
have a 172 landing in your living room.

--Doug

Sent via Deja.com http://www.deja.com/
Before you buy.

674. "The Gunnplexer Cookbook"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: wbbblair@worldnet.att.net
Message-ID: <388d167b.14047129@netnews.worldnet.att.net>
Source record: 63829

Anyone know where I can find a copy of Robert Richardson's (W4UCH) book "The Gunnplexer Cookbook." It looks like it's been out of print for quite some time.

675. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: n8blk@aol.com
Message-ID: <20000124233313.01339.00000079@nso-ce.aol.com>
Source record: 63830

In article <86d77g$l84@unix1.cc.ksu.edu>, mcalhoun@ksu.edu (Myron A Calhoun)
writes:

>But no one questioned WHY your FT-100 is overloading a (presumably) 20-amp
>power supply. Even if the "20" is "max for a very short while", unless
>your "AMP 20" is really unusual, it ought to supply something like 13-15
>amps practically "forever". I've never owned an FT-100, but guessing
>it to be rated at about 250 watts PEP, or about 125 watts DC, it ought
>to need about 10 amps for the final plus a couple or three for the other
>circuitry. Unless you have a speech processor driving it like mad, or
>unless your "rag chewing" is actually RTTY, I'm surprised that your
>power supply can't handle that demand.
>

I suggest that on transmit that a minimum of 16 amps will be drawn, and that 20
amps is indeed possible with a 100 watt ssb rig. Remember that the rig is not
100% efficient in converting input current into RF, and that the usual
guestimate is about 50% efficient in the real world.
-art clemons-

676. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Barry L. Ornitz" <ornitz@NOSPAM.tricon.net>
Message-ID: <23aj4.160$_u6.16359@tw12.nn.bcandid.com>
Source record: 63831

Brad Thompson wrote in message +ADw-388D13DB.D46F0E49+AEA-valley.net+AD4-...

+AD4-Most Teflon-insulated hookup wire goes through an extrusion
+AD4-process, in which the Teflon gets squeezed onto the outside of
+AD4-the wire to form the insulation. This occurs at a temperature
+AD4-high enough to oxidize untinned copper or vaporize standard
+AD4-tinning. However, silver resists the high temperature just fine,
+AD4-and as a bonus decreases skin-effect losses to some degree.

Sorry Brad. I used to accept this explanation many years ago, but
it is is completely wrong. I discovered this when I worked in the
R+ACY-D facilities of W. L. Gore +ACY- Associates. Before the Gore-TEx
fabric was invented, their original product was PTFE insulated
wire (+ACo-). It is still a major product. They make PTFE wire that
is both tin and silver plated. And they can coat bare copper too.

PTFE insulation is usually used because of its excellent
dielectric properties (good from DC to beyond microwaves). Since
much of this wire goes into RF and high-speed digital
applications, silver plating the wire improves skin effect losses
in the wire. PTFE is great for high-speed digital signals because
as an insulation, it has about the lowest dielectric constant of
any plastic. In low end applications where only the chemical and
temperature resistance of PTFE is needed, silver plating is often
not used. The cost of silver plating is generally quite low
compared to the cost of the PTFE insulation and the precision
needed in applying it. While I cannot divulge particulars, Gore's
coating process operates at +ACI-comfortable+ACI- temperatures, not high
ones. However there can be a sintering process after extrusion to
achieve certain physical properties that is performed at high
temperatures.

73, Barry L. Ornitz WA4VZQ ornitzNO+AEA-SPAMtricon.net

(+ACo-) Gore was quite ahead of his time. While at DuPont,he
discovered how well PTFE was as a wire insulation. He wanted to
produce ribbon cables for early computers using the technology
because with a lower dielectric constant insulation, propagation
speed in the wires was reduced. Of course, this was in the early
1950's and computers were not very high-speed at all - and
certainly not limited in speed by cables. DuPont was not
interested so he formed his own company. Today, Gore is the
world's biggest consumer of PTFE resin. They make wire and
cables, the Gore-Tex fabric, medical products, gaskets, and
filtration products.

677. 57762 1296 Mhz Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: drunkhillbilly@hotmail.com
Message-ID: <388d30b3.58612740@news.tcac.net>
Source record: 63832

Does anyone have a schematic for a 1296 amp using a pair of
Mitsubishi 57762 modules. I mainly interested in the pcb branched arm
couplers used in some designs.

Thanks

678. Silver oxide?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <lzaj4.3892$xX3.488889@typhoon2.gnilink.net>
Source record: 63833

I have often heard that "silver-oxide" is as good, or almost as good, a conductor as the silver itself? Is that a true statement?
Ed, K3FDY.

679. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <388D3848.2332@entheosengineering.com>
Source record: 63834
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

JGinNY wrote:
>
> I.e.,:
> Presuming that the modulator is supplying an increase in power (and
> therefore current) to the plate of the final amp, why wouldn't it show up
> as an increase ("kick") on the final's plate milliameter, as it does on the
> modulator's plate milliameter?
>
> thanks again for any comments/info
>
> 73
>
> reply to: jwgbee@hotmail.com

Because, half the time, the modulator's power is actually subtracting
from the carrier wave. With a very small or no modulation signal,
the modulator (which is probably running class AB) won't draw much
power. But the RF Amp is still putting out carrier. So when you drive
the modulator, it draws power, which you read on your meter, but the
average power of the RF amp, even though it's modulated, doesn't
change, because half of the modulator power is going into the "valleys"
-
half the time it's "bucking," and the other half, "boosting."
So it averages out to the same power as a bare carrier.

Cheers!
Rich

680. sorta OT-- oscilloscope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Chris Ross <pragmatist@kc.rr.com>
Message-ID: <388D6DA3.A73FCB35@kc.rr.com>
Source record: 63835

I have a very nice Heathbuilt O-scope that has been giving me fits lately. I am the third owner of this thing, and its in near mint condition. The inside is very clean and all wireing seems to be in order from what I can see. I get no output to the CRT at all, however. I have replaced all the vaccuum tubes in the thing and when the unit is turned on, they all light up just fine. I am beginning to suspect that I may very well have a bad CRT, which I am sure is very difficult to find. Any suggestions before I go on the Quest for the Holy Grail in finding a very expensive and probably no longer manufactured part that I have no part numbers on?

--

"One World, One Web, One Program" - Microsoft Promotional Ad
"Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

681. Re: Silver oxide?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <388D6C41.DF6ECC04@eznec.com>
Source record: 63836

I don't know about silver oxide, but the blackish stuff you find on
silver is usually silver sulfide. Silver sulfide has a resistivity of
1.5 to 2.0 X 10^-3 ohm-m, or about 100,000 times greater than silver.

Roy Lewallen, W7EL

> K3FDY wrote:
>
> I have often heard that "silver-oxide" is as good, or almost as good,
> a conductor as the silver itself? Is that a true statement?
> Ed, K3FDY.

682. Re: sorta OT-- oscilloscope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <388D6A7D.229B@pop.removethistomailme.net>
Source record: 63837

Chris Ross wrote:
>
> I have a very nice Heathbuilt O-scope that has been giving me fits
> lately. I am the third owner of this thing, and its in near mint
> condition. The inside is very clean and all wireing seems to be in order
> from what I can see. I get no output to the CRT at all, however. I have
> replaced all the vaccuum tubes in the thing and when the unit is turned
> on, they all light up just fine. I am beginning to suspect that I may
> very well have a bad CRT, which I am sure is very difficult to find. Any
> suggestions before I go on the Quest for the Holy Grail in finding a
> very expensive and probably no longer manufactured part that I have no
> part numbers on?
>

There's a nice eBay price guide for Tek scopes at:

http://www.reprise.com/host/tektronix/reference/scope_prices.asp

Check it out, you might be surprised how cheap a lab-grade analog scope
is these days. You might be able to buy a 453 or two for what it'll
cost (in terms of time and aggravation) to get the Heathkit running
reliably.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

683. Re: 137mhz transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <388d80b7.54152809@news.erols.com>
Source record: 63838

Don: This kind of project highlights the usefullness of another old piece of test gear: the venerable grid dipper (or the younger gate dipper). There are a lot of these things floating around e-bay. They are just the thing if you need some wierd frequency RF to test that non-ham band receiver. I used one recently to align my Ramsey Air Band receiver. Also used it to make sure the 43 MHz local oscillator in a 6 meter converter circuit was oscillating. Useful piece of gear. 73 Bill N2CQR

On Mon, 24 Jan 2000 22:58:58 GMT, danderso@inlandnet.net (Don Anderson) wrote:

>Dave,
> Nope, I hadn't thought of that! I'm not real "RF-literate", so I
>turn to you guys in this newsgroup when I need ideas, like this one.
>Thanks!
>Don
>
>
>On 21 Jan 2000 00:29:34 -0800, davem@groucho.cs.ubc.ca (Dave
>Martindale) wrote:
>
>>danderso@inlandnet.net (Don Anderson) writes:
>>>I need a schematic for a simple transmitter. The frequency range
>>>needed is 137-138mhz. Nothing fancy, just need to transmit a signal to
>>>see if my weather satellite receiver is detecting any signal at all.
>>
>>You may have thought of this already, but:
>>
>>See if you can borrow a SWR measuring device like an Autek RF-5 or the
>>MFJ equivalent. These contain a variable-frequency oscillator that
>>can be adjusted over a wide frequency range plus a frequency counter.
>>Attach a bit of wire to the output and you have a low-power transmitter,
>>without building anything.
>>
>> Dave
>

684. Re: sorta OT-- oscilloscope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: abcd1234 <abcd1234@ix.netcom.com>
Message-ID: <86k1d8$du0$1@news1.exit109.com>
Source record: 63839

hi chris,

I would like to buy that heath scope
just to play with it. I have a few CRTS also with me
3bp1 or something.

Chris Ross wrote in message <388D6DA3.A73FCB35@kc.rr.com>...
>I have a very nice Heathbuilt O-scope that has been giving me fits
>lately. I am the third owner of this thing, and its in near mint
>condition. The inside is very clean and all wireing seems to be in order
>from what I can see. I get no output to the CRT at all, however. I have
>replaced all the vaccuum tubes in the thing and when the unit is turned
>on, they all light up just fine. I am beginning to suspect that I may
>very well have a bad CRT, which I am sure is very difficult to find. Any
>suggestions before I go on the Quest for the Holy Grail in finding a
>very expensive and probably no longer manufactured part that I have no
>part numbers on?
>
>
>--
>
>"One World, One Web, One Program" - Microsoft Promotional Ad
>"Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler
>
>

685. Manual for Traffic TK-7270

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Tom Trumma <se.liu.lysator@trum>
Message-ID: <86k59r$8ge$1@newstoo.ericsson.se>
Source record: 63840

Looking for users manual or info how to program channel freq.
It's a digital FM scanner for low and high band (70/125MHz) early -80s.
Thanks,
Tom trum@lysator.liu.se

686. Re: Interface David Clarks to transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: w0vne@my-deja.com
Message-ID: <86kfngftp1@nnrp1.deja.com>
Source record: 63841

In article <3880799B.A0D2DAC3@suscom.net>,
"Alan D. Wilcox" <awilcox@suscom.net> wrote:
> Hello,
>
> I'd like to use David Clark H10-20 (or the H10-60) headsets with
> ham transceiver. They have electret microphone that needs a DC bias
> voltage applied.
>
> Anyone have a schematic of audio circuit of aviation transmitter? Or
> some thoughts on what circuitry I might kludge together to build
> an interface?
>
> Many thanks,
>
> Alan, W3DVX
Hi Alan. I did this some years ago. I found that you have to power
the mic. Unfortunatly the lash up I created worked fine for some bands
but others had so much RF feedback I put my headset back in my flight
bag. I wish you luck. Please post if yours works without feedback!

Jay W0VNE

w0vne@arrl.net
>

Sent via Deja.com http://www.deja.com/
Before you buy.

687. WTD: 1 Pair of 813 transmitting tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: n1eba@aol.com
Message-ID: <20000125082129.00352.00000476@ng-ch1.aol.com>
Source record: 63842

Anyone have a good pair of 813's? I need a pair.

email:
n1eba@aol.com

688. Re: sorta OT-- oscilloscope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <388DD474.F78F7B05@home.com>
Source record: 63843

To paraphrase MacArthur:" Old Scopes Never Die, They go to EBay"

The insides of a scope is something to be respected. You have to make sure there is no HV (unless you want to be sitting across the room on your fanny) and the CRT's, while not "fragile" like Bacarat Crystal, can be easily broken and fine shards of glass will get everywhere. It may be the HV - but you'll need an HV probe for your DVM.

When you consider the price of a manual, HV probe, possibility of purchasing a new CRT, it could very well be less expensive to buy a TEK453 as one correspondent suggests - somewhat of a boat anchor of a scope, but it does not use a proprietary IC's. I have one and the trace is just fine. Also, the ancient TEK545's are almost giveaway items these days - maybe $50 with a CA plugin. The only problem I've had with the 545 was due to switch contacts which are now fine because of increased frequency of use.

From what I've read here, the 5XXX (also cheap) series are mostly for medical and mechanical uses, nicely built and inexpensive but probably not suitable for RF or digital. I bought one (5103N-D11) for less than $20 and found a CRT for it for a bit more and donated it to a biophysicist where it was put to good use.

The TEK 2215, while a nice lightweight 50MHz scope, suffers from a very fragile CRT. Apparently there is a mesh near the face of the CRT onto which the beam is projected. The mesh is easily deformed by bumps - you see these scopes on EBAY in good condx in the $225 range. This is NOT a good scope for an undergraduate physics/EE lab! Unless you want to replace the CRT , avoid those with traces which are not absolutely perfect.

Chris Ross wrote:

> I have a very nice Heathbuilt O-scope that has been giving me fits
> lately. I am the third owner of this thing, and its in near mint
> condition. The inside is very clean and all wireing seems to be in order
> from what I can see. I get no output to the CRT at all, however. I have
> replaced all the vaccuum tubes in the thing and when the unit is turned
> on, they all light up just fine. I am beginning to suspect that I may
> very well have a bad CRT, which I am sure is very difficult to find. Any
> suggestions before I go on the Quest for the Holy Grail in finding a
> very expensive and probably no longer manufactured part that I have no
> part numbers on?
>
> --
>
> "One World, One Web, One Program" - Microsoft Promotional Ad
> "Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

689. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <388DA9FA.91D3C26B@sympatico.ca>
Source record: 63844

Clifford Buttschardt wrote:

> Yes I know of these manufacturers. I need specific information on chips
> that hams can obtain. It is important to differentiate between hams and
> the users of thousands of chips used in modern manufacturing. Cliff K7RR

The biggest challenge these days is not parts availability, but ham radio's mental block on the subject. Parts are available. You just have to dig a bit sometimes.

You can get the Motorola chips in onesies and twosies from folks like Newark. They don't care if you're a ham or not. All they care is if you have the money. You will pay a premium for buying in less than OEM quantities, but that's how the game works nowadays.

A nice minimal parts count FM radio chip is the TDA7000 and offshoots like TDA7010T (the SMD version). Still current, still readily available. The last ones I bought came from Mainline (TDA7000) and Electromail (TDA7010T).

GEC Plessey packed it in years ago. I still have some SL6440 and SL6700 chips in my junkbox. No, they're not for sale. :-)
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

690. WTB: Heath SB-220 metal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Ron Boden <majrabsr@rconnect.com>
Message-ID: <s8ra0l537q5101@corp.supernews.com>
Source record: 63845
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I'm looking for chassis, front & rear panels and case for Heathkit SB-220 linear amplifier.

Ron, KA9ALC

691. Re: air variables measurment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000125091211.01374.00000129@nso-fa.aol.com>
Source record: 63846

In article <38868AA4.AFDB08FA@netdoor.com>, Butch Magee <butchkay@netdoor.com>
writes:

>If I have an air variable capacitor with no markings what ever anywhere
>on them, how can I measure the impedance to know if I can use the
>rascal?

Several ways:

First way is to measure the area of the plates and their spacing, then use the
following formula:

C (pf) = (0.224 x A) / D

where

A is the total area of all of the plates on either the rotor or stator in
square inches (use the smaller of the two)

D is the plate separation in inches

Second way is to use some sort of Q meter, capacitance meter or RLC bridge - if
you have one

Third way is to use a grid dipper and a known inductor. You put the known
inductor (don't use a toroid) and the unknown capacitor in parallel and measure
the resonant frequency by means of the dip meter. It's a good idea to check the
frequency with a frequency counter or general coverage receiver, because grid
dip meter calibration is usually awful. The capacitance can then be calculated
from the formula:

C = 25,330 / (F x F x L)

where

F is the frequency in MHz

L is theinductance in microhenries

C is the capacitance in pF

All three methods work, but the second way is the most accurate - IF you have
the test gear. The dipper method works really well too, but you have to do the
measurements carefully. 10% error is doing pretty good, btw.

73 de Jim, N2EY

Every one rest easy, I'm not gonna take the extra exam and
>pass, making you look silly and dumb, before or after the 15th of

>April. I don't know all I understand now! :o)

692. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Laszlo I. Morocz" <kf4pv@SPAMMENOTlmorocz.com>
Message-ID: <evij4.38020$ZS.4183@jump.innerx.net>
Source record: 63847
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

How would CW stop this? All we'd get is:

.- -. -.-- -.-- --- ..- -. --. --. .. .-. .-.. ... etc

CW is not an acceptable behavior filter. In fact, if I had a dollar for
every time I had ... . - and ..-. ..- and so on sent to me (at high
speeds even!), I could buy my 20 wpm code test and have a "real" Extra
license before they go extinct. :-)

73 de KF4PV/3, Laszlo
--
To reply, remove the text SPAMMENOT from the e-mail address.

Mike S. [VK4NM] wrote in message ...
>Another proof why we should NEVER abandon CW requirement. . It filters
>things like this. Once you allow CBers on HF this is what's gonna happen.
> Well not exactly the same, but kind of ...)
>
>73 Mike VK4NM
>
>
>
>"MICHELE FREEDMAN" <Luppy1961@email.msn.com> wrote in message
>news:uW#xxseZ$GA.248@cpmsnbbsa02...
>> Maybe you can't read? This ng is for amateur radio. go find the proper
>> place for your post.
>>
>>
>>
>> <news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net>
>> wrote in message
>> news:23010013.2733@adsl-63-197-143-124.dsl.scrm01.pacbell.net...
>> > My name is Darren Mulligan and I am an aspiring photographer from
>> California.
>> > I will get right to the meat and gravy of this post, so as not to waste
>> your time!
>> >
>> > +++++WHAT AM I SEEKING?+++++
>> >
>> > I am looking for young models (prefer early teen 14-16 year old female)
>> for nude and semi-nude photography. This is a great way for me to update
>my
>> portfolio, and also a great way for you to get a free portfolio, too!
This

>> could lead to employment in the Adult XXX entertainment business. What a
>> great way to make money!
>> >
>> > Please respond to one of the following e-mail addresses. I run my very
>own
>> mail server on an ADSL connection so you can be assured to complete
>> discretion and privacy. If one e-mail address does not work, simply try
>the
>> next!
>> >
>> > Sorry for the long list! My ADSL connection goes down from time to
time,
>> so I posted all the e-mail addresses I can be reached at. If one does not
>> work, just move on to the next!
>> >
>> > nanae@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > usenet@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > 24hoursupport.helpdesk@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > news.admin.net-abuse.email@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > spamlinkpage@adsl-63-197-143-124.dsl.scrm01.pacbell.net
>> > alt.make.money.fast@nntp.8m.com nanas@nntp.8m.com
>> > hostmaster@FREESERVERS.COM
>> >
>> > THIS IS NOT A SCAM! IT IS NOT CHILD PORN!!
>> > There is nothing wrong or illegal about the artistic representation of
a
>> young body. If you have a problem with this post, please e-mail me and I
>> will not post to your newsgroup again!
>> >
>> > Sincerely,
>> > Darren Mulligan
>> >
>>
>>
>
>

693. Re: "The Gunnplexer Cookbook"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <r0dr8skf3s6suj5ebcq41ndt763mop494f@4ax.com>
Source record: 63848

On Tue, 25 Jan 2000 03:22:12 GMT, wbbblair@worldnet.att.net (William Blair) wrote:

>Anyone know where I can find a copy of Robert Richardson's (W4UCH) book "The >Gunnplexer Cookbook." It looks like it's been out of print for quite some >time.

I have a copy and I have to say that there is a reason why it has been out of print: Finding the parts for what he suggests is not practical in most cases. The ideas aren't bad ones, however.

If you'd like to correspond about this with me further, feel free to use e-mail...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

694. Re: sorta OT-- oscilloscope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <oFjj4.48712$Lf2.1286515@news6.giganews.com>
Source record: 63849

Chris you didn't say where you live. I'm sure I could fix that unit easily.
Does the CRT light? Check the power supply to see if it has proper output.
Do you have the diagram?

I have a Tektronix 535 'scope with dual trace plugin that I'd let go very
cheaply if it comes to that.

I live in Los Angeles.

73, Bob

695. Re: Plate Modulation -- Plate Current change ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: sparksw4eas@mindspring.com
Message-ID: <86ki9o$r9r$1@nntp2.atl.mindspring.net>
Source record: 63850
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Well stated. Sparks W4EAS

Rich Grise wrote in message <388D3848.2332@entheosengineering.com>...
>JGinNY wrote:
>>
>> I.e.,:
>> Presuming that the modulator is supplying an increase in power (and
>> therefore current) to the plate of the final amp, why wouldn't it show up
>> as an increase ("kick") on the final's plate milliameter, as it does on
the
>> modulator's plate milliameter?
>>
>> thanks again for any comments/info
>>
>> 73
>>
>> reply to: jwgbee@hotmail.com
>
>Because, half the time, the modulator's power is actually subtracting
>from the carrier wave. With a very small or no modulation signal,
>the modulator (which is probably running class AB) won't draw much
>power. But the RF Amp is still putting out carrier. So when you drive
>the modulator, it draws power, which you read on your meter, but the
>average power of the RF amp, even though it's modulated, doesn't
>change, because half of the modulator power is going into the "valleys"
>-
>half the time it's "bucking," and the other half, "boosting."
>So it averages out to the same power as a bare carrier.
>
>Cheers!
>Rich

696. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Robin Birch <robin.birch@postoffice.co.uk>
Message-ID: <948817518.2220@igateway.postoffice.co.uk>
Source record: 63851

Laura Halliday wrote in message <388DA9FA.91D3C26B@sympatico.ca>...
>Clifford Buttschardt wrote:
>
>> Yes I know of these manufacturers. I need specific information on chips
>> that hams can obtain. It is important to differentiate between hams and
>> the users of thousands of chips used in modern manufacturing. Cliff K7RR
>
Philips publish a very good book covering all of their RF chips. Although
these are aimed at the cellular market they are very adaptable to a single
chip RF solution.

>The biggest challenge these days is not parts availability, but ham
>radio's mental block on the subject. Parts are available. You just
>have to dig a bit sometimes.
>

The Philips range are certainly, or at least the more popular items,
available from Farnells in the UK.

Cheers

Robin

M5ABD, M1ASU, 2E0ARJ

697. FS:Radio & Telegraph Catalogs on CD's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Steve Massey <N6TT@jps.net>
Message-ID: <388dd15f_3@news.jps.net>
Source record: 63852

Check out the Radio & Telegraphy LIST of 105 Catalogs on "CD"s-
HomeSpun Catalogs http://www.telegraph-wireless.com/Homespun

698. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <388DE114.BF86A86@corecomm.net>
Source record: 63853
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

David DiGiacomo wrote:
> Note, there is an unfortunate problem with this type of power
> supply... when the line voltage is turned off, the output voltage
> tends to rise quite a bit while the filter cap discharges. Be sure to
> check for this behavior before connecting anything that might be
> damaged by it.

Is it worth crowbarring the circuit when the current draw is significant?

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

699. PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Ed Lyons <elyons@sympatico.ca>
Message-ID: <388E0BB6.971BB30C@sympatico.ca>
Source record: 63854

I am looking for a simple windows base program to do PC board layouts. I have been searching through the web and found a few that are free like Express PCB. Yes this one is free but the catch is that they will do your boards at about $120 US for 2.
I can print this one out but they mask it so you cannot build your on.

I am willing to pay for a program but not $400.00 + to do 1 single board.

Can you help me?

Thanks in advanced

--
Ed Lyons

700. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <388DE4CB.4DD4576D@corecomm.net>
Source record: 63855

Doug Smith wrote:
> Judging from the list of addresses embedded in here, it looks to me like
> somebody has a beef with PacBell.net and is trying to harrass their
> support lines by filling them with porn complaints. I don't think
> there's any real porn going on here. It almost looks like the jerk got
> shut down for spamming & isn't willing to pay the penalty.

In fact, this was abuse spam, not sent by the owner of the DSL hookup
named in the spam but by someone looking to harm him. PacBell abuse
personnel were intelligent enough to realize this, and are sending out
complaint replies informing people of this.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

701. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <948823670.328829308@news.indigo.ie>
Source record: 63856

On Tue, 25 Jan 2000, Clifford Buttschardt wrote:
>Yes I know of these manufacturers. I need specific information on chips
>that hams can obtain. It is important to differentiate between hams and
>the users of thousands of chips used in modern manufacturing. Cliff K7RR
>

The Motorola MC13135 is a useful device. I have a couple of spare
MC13135DW (Surface Mount.) They are yours if you want them.
0.05in pin spacing. Not too difficult to solder by hand.

73, Ed. EI9GQ.

--

Remove 'X' to reply by e-mail.

EI9GQ Homebrew radio page: http://www.qsl.net/ei9gq

702. Re: LM317 power supply query - lm317ps.gif (0/1)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@corecomm.net>
Message-ID: <388DE6B5.66695AEF@corecomm.net>
Source record: 63857

Michael Black wrote:
> Too bad about all the ads in rec.radio.amateur.homebrew They do seem
> to be on an increase, and as expected, they don't stop at items specifically
> related to building radio equipment, not that those are particularly
> on topic in a discussion newsgroup.

Yeah. Typically this newsgroup is about 20% articles that belong somewhere
else, most in rec.radio.swap. (I leave the spam marked "unread", then when
finished reading the non-spam stuff, compare unread to total articles in
the newsgroup. It ranges from 10% to 30%. Today it's lower than average,
15/125 or 12%.)

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

703. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <86kq60$n94$1@ausnews.austin.ibm.com>
Source record: 63858

In <388E0BB6.971BB30C@sympatico.ca>, Ed Lyons <elyons@sympatico.ca> writes:
>I am looking for a simple windows base program to do PC board layouts. I
>have been searching through the web and found a few that are free like
>Express PCB. Yes this one is free but the catch is that they will do
>your boards at about $120 US for 2.
>I can print this one out but they mask it so you cannot build your on.
>
>I am willing to pay for a program but not $400.00 + to do 1 single
>board.
>
> Can you help me?
>
>Thanks in advanced
>
>--
>Ed Lyons
>

I've used one named EASYTRAX. It runs under DOS, although I think
it should run in the DOS box in Win95. I've been pleased with the
functionality and ease of use of it. However, it's rather ancient,
and you'll have to see if the output devices it supports are
available in your installation.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

704. ft890 & cw fault ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: digit <dave@omens.freeserve.co.uk>
Message-ID: <86kqra$6r9$1@news5.svr.pol.co.uk>
Source record: 63859

hi thanks for reading,

i have an ft890 that works fine on all bands and all modes except
cw, it will only put out milliwatts on cw ?in semi breakin and full.
i know it has not been modified for qrp as i bought it new.
i have tried all the usual things ,but still can get only milliwatts
out of it.
when you push the tune button on atio tuner in cw mode it will then
display full power for a split second as would be expected.

any help or info would be a blessing!

thanks in advance

de dave mw5adj...........

705. Re: 57762 1296 Mhz Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Harke Smits <harke.smits@net.hcc.nl>
Message-ID: <388DF13F.EA7F7827@net.hcc.nl>
Source record: 63860

Hello,

I used some Sage wireline some years ago with great succes. Two modules
are easily combined this way. Refer to Dubus 2/94

73 de Harke

DrunkHillBilly wrote:

> Does anyone have a schematic for a 1296 amp using a pair of
> Mitsubishi 57762 modules. I mainly interested in the pcb branched arm
> couplers used in some designs.
>
> Thanks

706. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <7prr8sgvp4cuofqf9gbj6kopibmce24fcj@4ax.com>
Source record: 63861

Ed Lyons <elyons@sympatico.ca>
shared these priceless pearls of wisdom:

->I am looking for a simple windows base program to do PC board layouts.

www.microcode.com will get you to Circuitmaker and Traxmaker. They have a "student" version that will probably do your job. Our school has the full blown version, and I doubt I'd use it on an 8-layer motherboard, but for relatively simple (say, less than a thousand components) it does a very, very good job. It is quite easy to learn, and while there are inevitable "singularities" and glitches, it is no worse (and in fact really much better) for burps than anything else I've tried in the last 30 years.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

707. Re: '4046 SPICE Model

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <86krti$99s$1@nntp3.atl.mindspring.net>
Source record: 63862

>> maddog@io.com wrote:
>>
>> > >JW (jdwalton@home.com) wrote:
>> > >: I have been searching in vain for a SPICE model for the 4046 PLL, anyone
>> > >: care to point me in the right direction?
>> > go to
>> > http://www.intersil.com/search/
>> > and query '4046'

Carl R. Stevenson <wa6vse@fast.net> wrote:
>Sorry, but I looked at that model and it is NOT a model of the 4046 PLL
>chip.

Philips has an improved version, '9046(?) and there's supposed to be a
bunch of ap. notes on that on their web site (somewhere).

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

708. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <86krtj$ia4$1@nntp4.atl.mindspring.net>
Source record: 63863

In article <grQi4.3344$pU.528368@typhoon1.gnilink.net>,
K3FDY <edek@mail.gcnet.net> wrote:
>Does anyone know why the conductor in teflon insulated wire is invariably
>silver-plated?

For gauges around 26-30, its main use is for wire-wrap connections.
You'd have to go digging in old Bell Lab's stuff to see why The
Phone Company felt that the silver plating was necessary.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

709. Re: Interface David Clarks to transceiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: davem@groucho.cs.ubc.ca
Message-ID: <86ktgm$3et@groucho.cs.ubc.ca>
Source record: 63864

w0vne@my-deja.com writes:
>Hi Alan. I did this some years ago. I found that you have to power
>the mic. Unfortunatly the lash up I created worked fine for some bands
>but others had so much RF feedback I put my headset back in my flight
>bag. I wish you luck. Please post if yours works without feedback!

I've found that David Clarks seem to be susceptible to nearby RF
transmitters - even a handheld aviation transceiver putting out only
2 W if the antenna is nearby. A Telex headset I tried worked better,
so perhaps it's just lousy shielding on the DCs.

Dave

710. Re: OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <388E0A59.92EB50FF@agilent.com>
Source record: 63865

Oh, dear. I think what I have is 10uF*4 at 450V. I have two dozen NOS,
and actually if anyone wants some, make me an offer I can't refuse. And
I can tell you, it wouldn't take much of an offer. I'll have to
double-check the value.

Cheers,
Tom

Brian Hill wrote:
>
> Need 20mfd x 4 450v .
> Thanks
> 73 Brian
>
> Brians Radio Universe
> http://www.jps.net/jonnysocko

711. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: nh7t@qsl.net
Message-ID: <388E001E.6F932D8B@qsl.net>
Source record: 63866

check http://www.cadsoft.de/freeware.htm
the soft has about all features needed.
the demo soft is limited to 100x80cm board size.
the registered version is rather xpensive.
so far the demo suits my needs.
hope it helps ....
73, rico

--
nh7t/df2ck
icq#: 37922750

712. Re: "The Gunnplexer Cookbook"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: larryc@northwest.com
Message-ID: <388E1281.4705@northwest.com>
Source record: 63867

if you like, i can make a copy of the entire book... but i'll get a cost estimate to you for that.

as for being out of print due to parts no longer being available (as mentioned in another email posting), any ham with more than 4 working brain cells can get the circuits to work...

n3ccw

William Blair wrote:
>
> Anyone know where I can find a copy of Robert Richardson's (W4UCH) book "The
> Gunnplexer Cookbook." It looks like it's been out of print for quite some
> time.

713. Re: Construction articles for solid-state amps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: C Andersson <sm6pxj@hotmail.com>
Message-ID: <SOoj4.840$5o3.2376@nntpserver.swip.net>
Source record: 63868

http://www.picks.force9.co.uk/throb.htm

73
sm6pxj

714. Shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000125174331.03993.00000283@ng-ff1.aol.com>
Source record: 63869

Does anyone know a source for 1/4" shaft couplers? I need one, possibly two for a project I'm doing.

Thanks in advance.
73 de John N3DRA
Reply to this newsgroup or n3dra@nospamaol.com, remove nospam.

715. Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000125174944.03993.00000287@ng-ff1.aol.com>
Source record: 63870

I have a new-old-stock roller inductor made by EF Johnson that I want to use in an antenna tuner project. It is ceramic with silver plated wire, and with a silver plated rolling contact. It squeaks and squeals terribly when rotated. Does anyone know if this thing can be lubricated, and with what lubricant?

Thanks in advance.
73 de John N3DRA

716. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: Duncan Walters <tesla@cwcom.net>
Message-ID: <388E317B.77294AB2@cwcom.net>
Source record: 63871

Hi John,
Try using a light coating of graphite powder.
73 Duncan G4DFV

JPhelan501 wrote:

> I have a new-old-stock roller inductor made by EF Johnson that I want to use in
> an antenna tuner project. It is ceramic with silver plated wire, and with a
> silver plated rolling contact. It squeaks and squeals terribly when rotated.
> Does anyone know if this thing can be lubricated, and with what lubricant?
>
> Thanks in advance.
> 73 de John N3DRA

717. WTB Socket for 4CX1000A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-25 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <388E47E5.C8CB8449@NO-SPAMtcainternet.com>
Source record: 63872
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.marketplace

Greetings,

Does anyone have an SK-800B socket (or equiv) and chimney (SK-806 or equiv) they'd like to part with at a reasonable price?

Thanks much.

NOTE: To reply directly to me, please remove NO-SPAM from my email address.
Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM received as a result of posting to these newsgroups, I find no other easy
solution.
--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address will not be tolerated. All spam is subject to a $200 per incident processing fee and possible legal action pursuant to federal regulations.

718. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <388F4F6F.4D4F@ixpres.com>
Source record: 63745

Ed OM,

Among all the other responses and sources you will get, look into
http:\\www.holophase.com.

Their CIRCAD program is very user friendly with a fast learning curve.
I have used it to design my SMT DDS VFO pc board, among other things.
Free download and use.

73 and GL,

Don, W6JL

Ed Lyons wrote:
>
> I am looking for a simple windows base program to do PC board layouts. I
> have been searching through the web and found a few that are free like
> Express PCB. Yes this one is free but the catch is that they will do
> your boards at about $120 US for 2.
> I can print this one out but they mask it so you cannot build your on.
>
> I am willing to pay for a program but not $400.00 + to do 1 single
> board.
>
> Can you help me?
>
> Thanks in advanced
>
> --
> Ed Lyons

--
ï¿½ï¿½à¡±ï¿½

719. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-E36F9C.14535026012000@news.erols.com>
Source record: 63746
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

CBers have been on HF since day one (late 50's0!!

In article <388f1b6a.24498158@news.thegrid.net>,
cobrano-spam@budweiser.com (kf6foz) wrote:

> Since I do have a radio which goes there and listen on 10 meters half
> the time, I have to say that I have heard maybe 3 or 4 CB'ers in that
> low segment in the past 3 yrs. However, I have heard more bootleggers
> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers to
> use The ham portions of HF legally. They usually dont last too long
> when they are there and we must remember that other countries sell
> radios as CB that cover these bands and may well be another country
> you are hearing. While I do admit that there are CB'ers that go there,
> I also find that in that segment there SWR is really high and that
> deters them from coming back. Another reason I think that FCC doesnt
> do too much about CB radio is the fact that DX kind of helps the cb
> get away with alot since I know I dont want to travel 3,000 miles to
> catch an operator in the act, plus the other countries that operate
> legaly in those bands as CB operators kind of help to camouflage the
> signals. That is funny about the roger beeps and weird talk.....
>
> When I asked the question below, I just thought that there was some
> news that I didnt hear.
>
> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
> <johnande@nospaminterl.net> wrote:
>
> >
> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
> >news:388c51b3.2265222@news.thegrid.net...
> >> Who is allowing CB'ers on HF?
> >
> >
> >Listen on low end of ten meters. Lots of cbers there, with their roger
> >beeps
> >and noises and wierd talk.
> >
> >John Anderson K0BKL
> >
> >http://www.interl.net/~johnande/
> >
> >
> >
> >>

> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
> >> <vk4nm@hotmail.com> wrote:
> >>
> >> >Another proof why we should NEVER abandon CW requirement. . It
> >> >filters
> >> >things like this. Once you allow CBers on HF this is what's gonna
> >> >happen.
> >> > Well not exactly the same, but kind of ...)
> >> >
> >
> >
> >
>
> http://www.qsl.net/kf6foz/

720. Re: Silver-plated Teflon wire. One other reason is that the current density increases with distance from the centre of the conductor. This is the reason, when copper was very expensive you had cable with copper conductors cored with aluminium. Silver us a better conductor then copper which is abetter conductor than aluminium !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: alland@planetinternet.be
Message-ID: <388f4fd4.12929949@news.planetinternet.be>
Source record: 63747

On Tue, 25 Jan 2000 04:36:11 GMT, mzenier@netcom.com (Mark Zenier)
wrote:

>In article <grQi4.3344$pU.528368@typhoon1.gnilink.net>,
>K3FDY <edek@mail.gcnet.net> wrote:
>>Does anyone know why the conductor in teflon insulated wire is invariably
>>silver-plated?
>
>For gauges around 26-30, its main use is for wire-wrap connections.
>You'd have to go digging in old Bell Lab's stuff to see why The
>Phone Company felt that the silver plating was necessary.
>
>Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident
>

721. BIG CW transmitter wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Jim Berry K7SLI <basalop@gte.net>
Message-ID: <enwj4.2540$K26.47944@dfiatx1-snr1.gtei.net>
Source record: 63748
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Hello Everyone,

I would like to find a WWII USN TCK transmitter. Have looked for years and have had no luck. This old rig used a pair of of 813's for finals and was rated nominally at 400 watts out.

Since I have been unable to locate a TCK, I am also looking for something similar. Say an ex commercial rig like a Mackay Marine that uses a pair of 813's.

Wish I had all the parts, I would build a transmitter using a pair of 813's. If you know of a homebrew one that needs a home let me know.

I would prefer a real grid driven transmitter. Not a GG rig. I do need a power supply (both plate and for the screens), control circuitry, a rack cabinet etc. Guess what I am saying is if you know where I can locate any part of transmitter, I might just be interested.

Ah heck, it does not even have to run a pair of 813's. Just be in the 500 watt output range, cover the ham bands, and I do not need any kind of modulation system since the rig will be used on CW.

I would sure like to find something in the PNW. The shipping cost of one of these big rigs can get a wee bit spendy, besides the hassle one has to go to just to pack the thing.

If you have any info, drop me a note at basalop@gte.net.

73 Jim K7SLI

722. Re: WTD: 1 Pair of 813 transmitting tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000126155533.17628.00000184@ng-fi1.aol.com>
Source record: 63749

If anyone wants an NOS RCA 813, I have a single one in the original, early 1940's RCA tri-color box, price 28.00, delivery in USA included.

Please respond privately if interested.
Regards,
Joe Pratt, Tubecntral@aol.com

723. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <388f79e8.3469233@news.thegrid.net>
Source record: 63750
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Of course they have. 11-meters is an HF band.

On Wed, 26 Jan 2000 14:53:50 -0500, Steve
<amradio@thebizlink.com.removethis> wrote:

>CBers have been on HF since day one (late 50's0!!
>
>
>In article <388f1b6a.24498158@news.thegrid.net>,
>cobrano-spam@budweiser.com (kf6foz) wrote:
>
>> Since I do have a radio which goes there and listen on 10 meters half
>> the time, I have to say that I have heard maybe 3 or 4 CB'ers in that
>> low segment in the past 3 yrs. However, I have heard more bootleggers
>> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers to
>> use The ham portions of HF legally. They usually dont last too long
>> when they are there and we must remember that other countries sell
>> radios as CB that cover these bands and may well be another country
>> you are hearing. While I do admit that there are CB'ers that go there,
>> I also find that in that segment there SWR is really high and that
>> deters them from coming back. Another reason I think that FCC doesnt
>> do too much about CB radio is the fact that DX kind of helps the cb
>> get away with alot since I know I dont want to travel 3,000 miles to
>> catch an operator in the act, plus the other countries that operate
>> legaly in those bands as CB operators kind of help to camouflage the
>> signals. That is funny about the roger beeps and weird talk.....
>>
>> When I asked the question below, I just thought that there was some
>> news that I didnt hear.
>>
>> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
>> <johnande@nospaminterl.net> wrote:
>>
>> >
>> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
>> >news:388c51b3.2265222@news.thegrid.net...
>> >> Who is allowing CB'ers on HF?
>> >
>> >
>> >Listen on low end of ten meters. Lots of cbers there, with their roger
>> >beeps
>> >and noises and wierd talk.
>> >
>> >John Anderson K0BKL

>> >
>> >http://www.interl.net/~johnande/
>> >
>> >
>> >
>> >>
>> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
>> >> <vk4nm@hotmail.com> wrote:
>> >>
>> >> >Another proof why we should NEVER abandon CW requirement. . It
>> >> >filters
>> >> >things like this. Once you allow CBers on HF this is what's gonna
>> >> >happen.
>> >> > Well not exactly the same, but kind of ...)
>> >> >
>> >
>> >
>> >
>>
>> http://www.qsl.net/kf6foz/

http://www.qsl.net/kf6foz/

724. signal one

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Rich Peet <peet@citilink.com>
Message-ID: <bsLj4.8365$v31.883145@ptah.visi.com>
Source record: 63751

I hope I am not the last to have one of these.
I am looking for a plate choke for a signal one cx7. I am using a junk part right now, so don't have 160m capability with the rig.
I will trade for a final tube, driver transistor, as well as the original engineers recommended mods notes that are not published. If you looked for these parts you know this is a great deal.

725. Re: Heathkit HW-101 60Hz noise

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <bwLj4.156$AX3.20546@news20.bellglobal.com>
Source record: 63752
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur

I would not worry about the hum you heard. You are picking up the residue of suppressed carrier. Try transmitting into a well shielded dummy load and then listen to your signal with another receiver without an antenna.

726. 4-1000 amplifier plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: WR4F <wr4f1@juno.com>
Message-ID: <axLj4.51536$Lf2.1366296@news6.giganews.com>
Source record: 63753

does anyone have a construction article for a 80-10meter amp any help would be appreciated thanks and 73 please e-mail wr4f1@juno.com

727. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <388F7A9C.5E8A@pop.removethistomailme.net>
Source record: 63754

ae4jy@mindspring.com wrote:
>
> Am trying to get a MiniCircuits SBL-1 mixer working for a high level
> signal application and am having trouble getting +7dBm into the LO
> port. The RF and IF ports are terminated with 50 Ohms.
> I thought the LO impedence was 50 ohms but appears to be closer to 15
> Ohms at 4MHz and also is very non linear. I found an app note with a
> table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
> assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
> My 50 Ohm signal generator tops out at +18dBm and it still will not
> drive the LO port to 1.4vp-p.
> What am I missing?

You're driving a pair of diodes, remember. You just want to get them
into a reasonably-saturated portion of their curves. The only thing
that matters is IMD -- if you can reach the manufacturer's IMD spec with
your particular LO, you don't need to lose sleep over exact impedances
and power levels.

If you ever see more than 1.4v p-p going into the mixer, it means you've
fried a diode or two.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

728. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <86o4ep$1iu$1@bgtnsc02.worldnet.att.net>
Source record: 63755

Dan Richardson wrote in message <388f219d.2597708@news.mcn.org>...
>I use a product called "Tunerlub" made by GC Electronics cat# 26-01.
>I purchased it at an electronic parts supply store. It is used to lube
>TV tuners, switch contacts, relays and the like.
>
>Note is used very sparingly and a small tube will be a life time
>supply.
>
>73
>Danny, K6MHE
>

How many rotary or turret tuners will we clean in our lifetimes?
I don't miss cleaning them.
Al

729. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <388FB497.DA9D7CA0@valley.net>
Source record: 63756

"Barry L. Ornitz" wrote:

> Brad Thompson wrote in message +ADw-388D13DB.D46F0E49+AEA-valley.net+AD4-...
>
> +AD4-Most Teflon-insulated hookup wire goes through an extrusion
> +AD4-process, in which the Teflon gets squeezed onto the outside of
> +AD4-the wire to form the insulation. This occurs at a temperature
> +AD4-high enough to oxidize untinned copper or vaporize standard
> +AD4-tinning. However, silver resists the high temperature just fine,
> +AD4-and as a bonus decreases skin-effect losses to some degree.
>
> Sorry Brad. I used to accept this explanation many years ago, but
> it is is completely wrong. I discovered this when I worked in the
> R+ACY-D facilities of W. L. Gore +ACY- Associates. Before the Gore-TEx
> fabric was invented, their original product was PTFE insulated
> wire (+ACo-). It is still a major product. They make PTFE wire that
> is both tin and silver plated. And they can coat bare copper too.
>
> PTFE insulation is usually used because of its excellent
> dielectric properties (good from DC to beyond microwaves). Since
> much of this wire goes into RF and high-speed digital
> applications, silver plating the wire improves skin effect losses
> in the wire. PTFE is great for high-speed digital signals because
> as an insulation, it has about the lowest dielectric constant of
> any plastic. In low end applications where only the chemical and
> temperature resistance of PTFE is needed, silver plating is often
> not used. The cost of silver plating is generally quite low
> compared to the cost of the PTFE insulation and the precision
> needed in applying it. While I cannot divulge particulars, Gore's
> coating process operates at +ACI-comfortable+ACI- temperatures, not high
> ones. However there can be a sintering process after extrusion to
> achieve certain physical properties that is performed at high
> temperatures.
>
> 73, Barry L. Ornitz WA4VZQ ornitzNO+AEA-SPAMtricon.net
>
>

Hello--

Actually, Barry is correct; I'm guilty of oversimplification in stating that
"Teflon" (Dupont's trademark) necessarily requires silver-plated wire for
oxidation
resistance during processing.

There are many variants of fluorocarbons, of which Gore's PTFE is one, Teflon FEP
is another and Tefzel (ETFE) is yet another. All feature different insulating and
chemical properties, and all probably require dfferent extrusion techniques.

Quoting from a 1985 copy of AT&T's Electronic Wire and Cable manual
(their publication no. 510-134): "...Tefzel requires the use of either a nickel- or
silver-plated conductor because bare copper wire cannot withstand the degree
of heat necessary to process and extrude Tefzel...."

Gore's processes may have rendered Tefzel obsolete, but there are plenty of fluorocarbon
insulations available to trap the careless<g>.

73,
Brad AA1IP

730. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <388FB4AA.CBDD5515@valley.net>
Source record: 63757

"Barry L. Ornitz" wrote:

> Brad Thompson wrote in message +ADw-388D13DB.D46F0E49+AEA-valley.net+AD4-...
>
> +AD4-Most Teflon-insulated hookup wire goes through an extrusion
> +AD4-process, in which the Teflon gets squeezed onto the outside of
> +AD4-the wire to form the insulation. This occurs at a temperature
> +AD4-high enough to oxidize untinned copper or vaporize standard
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> +AD4-and as a bonus decreases skin-effect losses to some degree.
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> fabric was invented, their original product was PTFE insulated
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> is both tin and silver plated. And they can coat bare copper too.
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> dielectric properties (good from DC to beyond microwaves). Since
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> applications, silver plating the wire improves skin effect losses
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> as an insulation, it has about the lowest dielectric constant of
> any plastic. In low end applications where only the chemical and
> temperature resistance of PTFE is needed, silver plating is often
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> achieve certain physical properties that is performed at high
> temperatures.
>
> 73, Barry L. Ornitz WA4VZQ ornitzNO+AEA-SPAMtricon.net
>
>

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73,
Brad AA1IP

731. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <388FB588.82104080@valley.net>
Source record: 63758

"Barry L. Ornitz" wrote:

> Brad Thompson wrote in message +ADw-388D13DB.D46F0E49+AEA-valley.net+AD4-...
>
> +AD4-Most Teflon-insulated hookup wire goes through an extrusion
> +AD4-process, in which the Teflon gets squeezed onto the outside of
> +AD4-the wire to form the insulation. This occurs at a temperature
> +AD4-high enough to oxidize untinned copper or vaporize standard
> +AD4-tinning. However, silver resists the high temperature just fine,
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> any plastic. In low end applications where only the chemical and
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> coating process operates at +ACI-comfortable+ACI- temperatures, not high
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> achieve certain physical properties that is performed at high
> temperatures.
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> 73, Barry L. Ornitz WA4VZQ ornitzNO+AEA-SPAMtricon.net
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resistance during processing.

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(their publication no. 510-134): "...Tefzel requires the use of either a nickel- or
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Gore's processes may have rendered Tefzel obsolete, but there are plenty of fluorocarbon
insulations available to trap the careless<g>.

73,
Brad AA1IP

732. Re: Need info on Kenwood TS570SG!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Scott Souva <ssouvaNOssSPAM@dreamscape.com.invalid>
Message-ID: <0a288596.baa01a1a@usw-ex0102-014.remarq.com>
Source record: 63759

Did you ever get your mod? I modified my 570D and it will not transmit beyond 29.995 MHz. I have held off buying the Ten-Tec transverter just because of this reason.

Have you considered asking Ten-Tec about changing the local oscillator from 116 MHz to 118 MHz? Then you could sweep your 570 from 26-30 MHz to cover the whole 2 meter band. The menu that displays the 144 sequence does not care where you start (i.e. 26 vice 28 MHz). Of course, you still need to mod your 570SG.

73 and good luck,

Scott Souva
KG2S

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

733. Prob pitch motor connections?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: trikpony@aol.com
Message-ID: <20000125195323.28552.00000773@ng-cg1.aol.com>
Source record: 63873

Hi - need to find connector info on a 1-rpm prop pitch motor. Any info? I can supply the specifics if I dig under about a foot of snow...

Thx/73

Patrick / wa6ctc

734. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <388E4DFA.ADE5E3F1@hotmail.com>
Source record: 63874

Get a product called "Penetrox", it is a copper filled silicone grease, used in the electrical industry. I use it, and it works great. It can be used on antennas too. Another product for aluminum antenna connections, is called "Ox-Gard" by GB, found at "Home Depot".

Duncan Walters wrote:

> Hi John,
> Try using a light coating of graphite powder.
> 73 Duncan G4DFV
>
> JPhelan501 wrote:
>
> > I have a new-old-stock roller inductor made by EF Johnson that I want to use in
> > an antenna tuner project. It is ceramic with silver plated wire, and with a
> > silver plated rolling contact. It squeaks and squeals terribly when rotated.
> > Does anyone know if this thing can be lubricated, and with what lubricant?
> >
> > Thanks in advance.
> > 73 de John N3DRA

735. F.C.C. citizen band enforcement question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <8uvj4.324$t6.41094@tw11.nn.bcandid.com>
Source record: 63875

I don't want to open a hot debate, but my question is this.
Has anyone sent detailed or documented occurrances of continuing
violations to a field office, and if so, did they care? Were you
contacted? Was the violation or occurances resolved? I am in
the process of gathering audio documentation of a violator, and
wonder if I am just wasting my time. All comments will be greatly
appeciated and thought about before continuing my effort.

TNX og 73
Gummi

736. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: ditdah <ditdah@fastlane.net>
Message-ID: <A898F46D033193E1.799E2C7B4F3C70B6.0E05A1947AD45F8C@lp.airnews.net>
Source record: 63876

I suggest silicone grease. It can be found in auto parts stores. A typical
use is hi-voltage spark plug wire boots.
JPhelan501 <jphelan501@aol.com> wrote in message
news:20000125174944.03993.00000287@ng-ff1.aol.com...
> I have a new-old-stock roller inductor made by EF Johnson that I want to
use in
> an antenna tuner project. It is ceramic with silver plated wire, and with
a
> silver plated rolling contact. It squeaks and squeals terribly when
rotated.
> Does anyone know if this thing can be lubricated, and with what lubricant?
>
> Thanks in advance.
> 73 de John N3DRA
>

737. WTB MC13135/36, MC3371/72

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: klocworx@v-wave.com
Message-ID: <86m951$ib2$1@burn.ab.videon.ca>
Source record: 63877

Hi all,
need small quantity of these Motorola FM chips:
MC13135/36 MC3371/72.
Thanks,
Arthur Kloc, VE6BOE
klocworx@v-wave.com

738. Fun with NE602 6 meter converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <388eca0a.51565347@news.erols.com>
Source record: 63878

At a recent meeting of the Northern Virginia QRP club, I fell victim to K3CHP's stories about the joys of six meters. I returned home and started rummaging through my junk box and old issues of QST.

I came up with a Signetics NE602 chip (mixer, oscillator, and voltage regulator in one 8 pin IC) and a crystal marked 43.333 MHz. The January 1997 QST had a good article by WA3ENK "Junk-Box Converters for 6 and 2 meters."

I used WA3ENK's 50 MHz input tuned circuit -- in my case I used a piece of a Radio Shack nut starter as the coil form. Looks very cool. Where ENK used a TTL oscillator chip as the LO, I just used the junk box crystal with a couple of caps (as per the Signetics spec sheet). For the output circuit (around 7 Mhz) I used a parallel tuned circuit with a toroid, a trimmer cap and a fixed cap. I just guessed and put a five turn secondary over the toroid for the output.

Construction was a combination of dead bug and Manhattan techniques: I just glued the NE602 chip "feet up" onto the center of a PC board. I then started attaching components to the IC leads, using isolation pads where necessary. When the cuicuit was done, I used tin shears to trim away the excess PC board material -- this excess served as the "walls" for a PC board box that I built up around the circuit. With a couple of BNC connectors and a 9 volt battery, I was in business.

I had to use my Ramsey AR-1 aircraft band receiver to confirm that the LO was oscillating (I could hear one of the harmonics). Connecting the converter to my old Lafayette HA600 general coverage receiver, I tuned around and immediately located my own 49 Mhz baby monitor. If you build a converter for 6, and live in a populated area, you'll find lots of signals in the 49 Mhz range -- these will help you tune up your invention and will provide reassuring confirmation that the thing is working.

As luck would have it, the January VHF contest was just kicking off when I finished up the converter. So Six was filled with strong CW and SSB sigs. From my Northern Virginia QTH I heard stations as far south as Florida and as far North as New Jersey.

Unfortunately, I could also hear SSB signals that were obviously not from the 50 Mhz band (unless we were experiencing some very unusual propagation -- I was listening to ragchews from Germany!). They sounded like 15 meters. Trying to figure out what was going on, I realized that the 43.333 Mhz rock I was using was a thrid overtone crystal, with a funamental at 14.4444 -- just the thing to put a 15

meter SSB signal in my converter's output.

Signetics' spec sheet suggested a series LC circuit at the fundamental frequency from pin 7 to ground. I wound a toroid, found some suitable caps. Two or three soldering connections later the 14.444 Mhz oscillations (and the German signals) were gone. This was a very satisfying fix.

This little project was a lot of fun -- just the thing if you are looking for something that you can throw together in a weekend. I was thinking that you could probably use some 26-27 Mhz CB crystals (available at Radio Shack) with an output in the 24 Mhz range.

As I went through the project, I wanted to get a better understanding of the NE-602 chip. I wanted it to be more than a miniature black box. There is lots of info out there on this chip. JF1OZL's web site has an excellent section on the workings of the '602's Gilbert Cell Mixer. Check it out:
http://www.intio.or.jp/jf10zl/gil.htm
(Be sure to take a look at the rest of his amazing Web Site while you're there.)

Anyway, I had a lot of fun with this project and now can listen to the Magic Band. I'd appreciate hearing comments from others who've built similar devices.

73 Bill N2CQR
http://www.erols.com/wmeara

739. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <86mkb2bfg1@neptunium.btinternet.com>
Source record: 63879

John, get a can of spray-on electrical switch cleaner from an engineers supply store and give it one or two quick bursts. It nearly all evaporates within a few seconds and leaves behind a slight trace of lubricant.

The last thing you should do is daub silicone grease or odinary lubricating oil over electrical contacts - they will no longer be in contact. You might just as well use butter with bread crumbs in it.
--
==========
Greetings from Reg, G4FGQ
For free technical radio software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
JPhelan501 <jphelan501@aol.com> wrote in message
news:20000125174944.03993.00000287@ng-ff1.aol.com...
> I have a new-old-stock roller inductor made by EF Johnson that I
want to use in
> an antenna tuner project. It is ceramic with silver plated wire, and
with a
> silver plated rolling contact. It squeaks and squeals terribly when
rotated.
> Does anyone know if this thing can be lubricated, and with what
lubricant?
>
> Thanks in advance.
> 73 de John N3DRA
>

740. Re: WTB Socket for 4CX1000A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <86mqlo$6e5$1@nnrp1.deja.com>
Source record: 63880
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.marketplace

In article <388E47E5.C8CB8449@NO-SPAMtcainternet.com>,
"Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com> wrote:
> Greetings,
>
> Does anyone have an SK-800B socket (or equiv) and chimney (SK-806 or
> equiv) they'd like to part with at a reasonable price?
>
> Thanks much.
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email
> address.
> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a result of posting to these newsgroups, I find no other
> easy
> solution.
> --
> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>
> Unsolicited commercial email (SPAM) received at this email address
> will not be tolerated. All spam is subject to a $200 per incident
> processing fee and possible legal action pursuant to federal
> regulations.
>

Try Richardson at www.rell.com or RFParts at http://www.rfparts.com/
The latter also has the socket Y254A&#65533;P, very expensive, I guess...
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

741. Re: WTD: 1 Pair of 813 transmitting tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <86mrql$78e$1@nnrp1.deja.com>
Source record: 63881

In article <20000125082129.00352.00000476@ng-ch1.aol.com>,
n1eba@aol.com (N1EBA) wrote:
> Anyone have a good pair of 813's? I need a pair.
>
> email:
> n1eba@aol.com
>

RF Parts at http://www.rfparts.com/ has them from
RCA/Westinghouse/GE/Taylor
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

742. Re: BIG CW transmitter wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Dennis Peterson <dpeterso@halcyon.com>
Message-ID: <388EECD2.5D56AD4D@halcyon.com>
Source record: 63882
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I have this marine equipment available (I too would love to have a Mackay LF rig - they were gorgeous rigs):

Circa 1981 Scientific Radio SSB Marine Radio-Telephone, 1-KW Linear Amplifier, and Antenna Coupler for sale. All service manuals are available.

This is a continuous coverage (1.5-30 mHz) 10 channel crystal controlled system that was built for severe duty at sea. The tranceiver delivers 150 watts PEP (100w continous) to a 50 ohm load. It is capable of AME, CW, and FSK. Power finals are 3 6146A's.

The Linear is a servo-controlled unit running twin 3-500Z triodes and is capable of 1-KW keydown *output* into a 50 ohm load all day long.

The antenna coupler is also servo-tuned and will handle everything from a bent coat hanger to a long-wire at full power.

Tranceiver: SR-210MD - 8 x 16.5 x 17.5 inches, 50 lbs, 115/230 vac
Linear Amp: SR-110B - 20 x 22.5 x 50 inches, 260 lbs, 115/230 vac
Ant. Coupler: SR-650 - 24 x 20 x 10 inches, 73 lbs, 115/230 vac

This is a rather heavy-duty project package. Converting to amateur frequencies is a trivial thing. Cabling diagrams are included in the books. This system was working fine when it was decommisioned from a local tug boat fleet.

It's big, it's heavy - if you're not in the Pacific Northwest it is probably not worth the freight to get it to you.

Make an offer!

Jim Berry K7SLI wrote:
> Hello Everyone,
>
> I would like to find a WWII USN TCK transmitter. Have looked for years and
> have had no luck. This old rig used a pair of of 813's for finals and was
> rated nominally at 400 watts out.
>
> Since I have been unable to locate a TCK, I am also looking for something
> similar. Say an ex commercial rig like a Mackay Marine that uses a pair of
> 813's.
>
> Wish I had all the parts, I would build a transmitter using a pair of 813's.

> If you know of a homebrew one that needs a home let me know.
>
> I would prefer a real grid driven transmitter. Not a GG rig. I do need a
> power supply (both plate and for the screens), control circuitry, a rack
> cabinet etc. Guess what I am saying is if you know where I can locate any
> part of transmitter, I might just be interested.
>
> Ah heck, it does not even have to run a pair of 813's. Just be in the 500
> watt output range, cover the ham bands, and I do not need any kind of
> modulation system since the rig will be used on CW.
>
> I would sure like to find something in the PNW. The shipping cost of one
> of these big rigs can get a wee bit spendy, besides the hassle one has to go
> to just to pack the thing.
>
> If you have any info, drop me a note at basalop@gte.net.
>
> 73 Jim K7SLI

--
dp -- BS#3, LF#27, AH#95
Jump to my auctions at:
http://eddiekieger.com/~dkp/cgi-bin/ek3auction.cgi?justdisp&Dp

Support Eddie Kieger III at http://eddiekieger.com
Got a home page? Please add a link to Eddie's site!

743. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: John Anderson <johnande@nospaminterl.net>
Message-ID: <86n0vt$2lh$1@forge3.sbt.net>
Source record: 63883
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

"kf6foz" <cobrano-spam@budweiser.com> wrote in message
news:388c51b3.2265222@news.thegrid.net...
> Who is allowing CB'ers on HF?

Listen on low end of ten meters. Lots of cbers there, with their roger beeps
and noises and wierd talk.

John Anderson K0BKL

http://www.interl.net/~johnande/

>
> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
> <vk4nm@hotmail.com> wrote:
>
> >Another proof why we should NEVER abandon CW requirement. . It filters
> >things like this. Once you allow CBers on HF this is what's gonna happen.
> > Well not exactly the same, but kind of ...)
> >

744. Re: homebrew qrp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <ffEj4.63$qw5.5599@dfw-service2.ext.raytheon.com>
Source record: 63884

Look for any and all QRP books by the late Doug DeMaw, W1FB.
They are/were ARRL publications. Check the ARRL web site to
see which are still available.

Dean / K5DH

In article <20000124100824.00361.00000033@ng-ch1.aol.com>, kd5fxt@aol.com
says...
>
>I would like to build a homebrew qrp from "scratch"... any resources or info
>would be greatly appreciated. Pse email info.
>
>tnx
>Bill

745. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <388f219d.2597708@news.mcn.org>
Source record: 63885

I use a product called "Tunerlub" made by GC Electronics cat# 26-01.
I purchased it at an electronic parts supply store. It is used to lube
TV tuners, switch contacts, relays and the like.

Note is used very sparingly and a small tube will be a life time
supply.

73
Danny, K6MHE

On 25 Jan 2000 22:49:44 GMT, jphelan501@aol.com (JPhelan501) wrote:

>I have a new-old-stock roller inductor made by EF Johnson that I want to use in
>an antenna tuner project. It is ceramic with silver plated wire, and with a
>silver plated rolling contact. It squeaks and squeals terribly when rotated.
>Does anyone know if this thing can be lubricated, and with what lubricant?
>
>Thanks in advance.
>73 de John N3DRA

746. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <388f1b6a.24498158@news.thegrid.net>
Source record: 63886
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Since I do have a radio which goes there and listen on 10 meters half
the time, I have to say that I have heard maybe 3 or 4 CB'ers in that
low segment in the past 3 yrs. However, I have heard more bootleggers
on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers to
use The ham portions of HF legally. They usually dont last too long
when they are there and we must remember that other countries sell
radios as CB that cover these bands and may well be another country
you are hearing. While I do admit that there are CB'ers that go there,
I also find that in that segment there SWR is really high and that
deters them from coming back. Another reason I think that FCC doesnt
do too much about CB radio is the fact that DX kind of helps the cb
get away with alot since I know I dont want to travel 3,000 miles to
catch an operator in the act, plus the other countries that operate
legaly in those bands as CB operators kind of help to camouflage the
signals. That is funny about the roger beeps and weird talk.....

When I asked the question below, I just thought that there was some
news that I didnt hear.

On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
<johnande@nospaminterl.net> wrote:

>
>"kf6foz" <cobrano-spam@budweiser.com> wrote in message
>news:388c51b3.2265222@news.thegrid.net...
>> Who is allowing CB'ers on HF?
>
>
>Listen on low end of ten meters. Lots of cbers there, with their roger beeps
>and noises and wierd talk.
>
>John Anderson K0BKL
>
>http://www.interl.net/~johnande/
>
>
>
>>
>> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
>> <vk4nm@hotmail.com> wrote:
>>
>> >Another proof why we should NEVER abandon CW requirement. . It filters
>> >things like this. Once you allow CBers on HF this is what's gonna happen.
>> > Well not exactly the same, but kind of ...)

>> >
>
>
>

http://www.qsl.net/kf6foz/

747. Re: "The Gunnplexer Cookbook"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <388F2BD1.F081A56B@sympatico.ca>
Source record: 63887

William Blair wrote:
>
> Anyone know where I can find a copy of Robert Richardson's (W4UCH) book "The
> Gunnplexer Cookbook." It looks like it's been out of print for quite some
> time.

No ideas, but the RSGB's _Practical Transmitters for Novices_
discusses 10 GHz Gunn diode stuff in detail, and is current.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

748. Re: WTB Socket for 4CX1000A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <F3Gj4.54981$475.1331622@news4.giganews.com>
Source record: 63888
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.marketplace

A lower cost alternative to the ceramic chimney is to use an appropriate sized sheet of thin teflon held in place by a hose clamp around the anode structure.

73 de Jack

py1ll@my-deja.com wrote in message <86mqlo$6e5$1@nnrp1.deja.com>...
>In article <388E47E5.C8CB8449@NO-SPAMtcainternet.com>,
> "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com> wrote:
>> Greetings,
>>
>> Does anyone have an SK-800B socket (or equiv) and chimney (SK-806 or
>> equiv) they'd like to part with at a reasonable price?
>>
>> Thanks much.
>>
>> NOTE: To reply directly to me, please remove NO-SPAM from my email
>> address.
>> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
>> received as a result of posting to these newsgroups, I find no other
>> easy
>> solution.
>> --
>> Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!
>>
>> Unsolicited commercial email (SPAM) received at this email address
>> will not be tolerated. All spam is subject to a $200 per incident
>> processing fee and possible legal action pursuant to federal
>> regulations.
>>
>
>Try Richardson at www.rell.com or RFParts at http://www.rfparts.com/
>The latter also has the socket Y254A&#65533;P, very expensive, I guess...
>--
>Greetings,
>
>Luiz - PY1LL
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

749. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <D4Gj4.67046$905.1354008@news5.giganews.com>
Source record: 63889

Molybdenum disulfide works great. This is also used to coat soldering irons and aluminum antenna parts. It's sometimes called anti-seize.

Frankly, ordinary oil works most of the time if you only use a little. The squeak is probably comiing from the roller shaft. While it might seem that oil will insulate the contacts, it doesn't seem to cause a problem as long as you don't use much. And sometimes no lubricant at all, just a good cleaning will do the job. I have found an excellent and free lubricant is finger oil; I just run my warm hands over the surfaces and the squeaks go away.

73, Bob K6DDX

750. Re: OK Guys cough up the multi caps!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <388F2C93.EB1C3096@agilent.com>
Source record: 63890

Well, they got smaller overnight. They are 10uF*3 @ 450V. If anyone
wants some, make me an offer that at least covers shipping and what it
costs me to drive to the post office. :-) Or come pick them up.

Cheers,
Tom
k7itm@aol.com

Tom Bruhns wrote:
>
> Oh, dear. I think what I have is 10uF*4 at 450V. I have two dozen NOS,
> and actually if anyone wants some, make me an offer I can't refuse. And
> I can tell you, it wouldn't take much of an offer. I'll have to
> double-check the value.

751. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: w0vne@my-deja.com
Message-ID: <86nji9qgr1@nnrp1.deja.com>
Source record: 63891

In article <388E0BB6.971BB30C@sympatico.ca>,
elyons@sympatico.ca wrote:
> I am looking for a simple windows base program to do PC board
layouts. I
> have been searching through the web and found a few that are free like
> Express PCB. Yes this one is free but the catch is that they will do
> your boards at about $120 US for 2.
> I can print this one out but they mask it so you cannot build your on.
>
> I am willing to pay for a program but not $400.00 + to do 1 single
> board.
>
> Can you help me?
>
> Thanks in advanced
>
> --
> Ed Lyons
>

Yikes what a racket those guys have. Check out
http://www.holophase.com and download the Circad program. There is a
DOS version and a Win95,8,NT rev. The "demo" lets you make a schematic
and small PCB. It's a "trick" to get you to try all the features and
say "Hey I like this" then when you want to build a more robust PCB /
Schematic you will want to buy it. While the list price is $995
licensed Ham Radio "Experimenters" or Students can get the same package
for $295.00 Give me a call (612) 492-3913 for details on the support
and updates. *It's a different scheme from the commercial version.
I'm a ham too and it's my crazy discount scheme that I talked the
Holophase Chiefs into.

Jay Craswell W0VNE
(612) 492-3913 Days

*Note number to change in a few months as we are moving the office.

Sent via Deja.com http://www.deja.com/
Before you buy.

752. Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: ae4jy@mindspring.com
Message-ID: <388f3e59.26022646@news.mindspring.com>
Source record: 63892

Am trying to get a MiniCircuits SBL-1 mixer working for a high level signal application and am having trouble getting +7dBm into the LO port. The RF and IF ports are terminated with 50 Ohms.
I thought the LO impedence was 50 ohms but appears to be closer to 15 Ohms at 4MHz and also is very non linear. I found an app note with a table showing a VSWR of around 3.5 at 1 MHz. The RF books I have assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
My 50 Ohm signal generator tops out at +18dBm and it still will not drive the LO port to 1.4vp-p.
What am I missing?

Any thoughts on using the AD831 mixer and is it tempermental? Aside from it's price and noise figure, it's specs look a lot better than the diode mixers.

thanks,
Moe, ae4jy

753. Re: Prob pitch motor connections?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <86nnof$u2n$1@nnrp1.deja.com>
Source record: 63893

In article <20000125195323.28552.00000773@ng-cg1.aol.com>,
trikpony@aol.com (TrikPony) wrote:
> Hi - need to find connector info on a 1-rpm prop pitch motor. Any
info?

The prop pitch motors I've seen have been big PM DC motors -- two
connectors, and the polarity supplied determined the direction
the armature turned. My W.A.G. at E and I is 28 VDC, 30A nominal.

Good luck
Jim N6OTQ

Sent via Deja.com http://www.deja.com/
Before you buy.

754. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-26 00:00:00 UTC
From: Roland Burgan <rburgan@up.net>
Message-ID: <388F4737.120DBA13@up.net>
Source record: 63894

It should be noted that the layout software
mentioned will only create a 100mm x 80mm PCB,
not, 100cm x 80cm.

nh7t@qsl.net wrote:

> check http://www.cadsoft.de/freeware.htm
> the soft has about all features needed.
> the demo soft is limited to 100x80cm board size.
> the registered version is rather xpensive.
> so far the demo suits my needs.
> hope it helps ....
> 73, rico
>
> --
> nh7t/df2ck
> icq#: 37922750

755. Re: F.C.C. citizen band enforcement question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <388F9F63.449D927A@hotmail.com>
Source record: 63760

The more complaints filed, from different sources on a common violator,
will get a better response.
If the violator is heard making death threats against anyone, the FBI
will be very interested.

gudmundur wrote:

> I don't want to open a hot debate, but my question is this.
> Has anyone sent detailed or documented occurrances of continuing
> violations to a field office, and if so, did they care? Were you
> contacted? Was the violation or occurances resolved? I am in
> the process of gathering audio documentation of a violator, and
> wonder if I am just wasting my time. All comments will be greatly
> appeciated and thought about before continuing my effort.
>
> TNX og 73
> Gummi

756. Re: 4-1000 amplifier plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <388F9FC1.52DB58D8@hotmail.com>
Source record: 63761

Bill Orr's book has a pretty good plan.
I have a filament transformer for it , if you need one.

WR4F wrote:

> does anyone have a construction article for a 80-10meter amp any help would
> be appreciated thanks and 73 please e-mail wr4f1@juno.com

757. FS: Novar tube sockets (for 9-pin sweeps)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000126220645.10911.00000121@ng-fu1.aol.com>
Source record: 63762

I have WAY too many novar (9-pin) tube sockets, so I'm selling my excess.
These sockets fit 7868's and 9-pin sweep tubes. They are saddle mount, with
solder tabs (not the cheesy PC type).

I'm asking $1.50 each (minimum 10), or 100 for $125.
In case you want to see what they look like, there is a picture posted at;

http://members.aol.com/Reactor001

Interested? Please respond by email (remove "nospam")

Regards,
Tom Mitchell
email - OvrReactor@aol.com

758. signal one

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: jeixray@aol.com
Message-ID: <20000126224009.14649.00000144@ng-cc1.aol.com>
Source record: 63763

I have one of these radios as my main radio in my station. I have all of the mods etc that were published in the user group club that at one time existed. I do not have the plate choke but i probably could measure mine and let you know the inductance etc. If i can be of help let me know.

jim
wa2njv

759. sbl-1

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: jeixray@aol.com
Message-ID: <20000126225124.14649.00000146@ng-cc1.aol.com>
Source record: 63764

I jsut finished my own homebrew receiver with this mixer. Don't get confused with this +7dbm. Yes you do need that amount of power, however put that power into a fixed 50 ohm resistor, make sure that the power level is +7 dbm, then connect it to the input port of the mixer. the 50 ohm resistor is only used to confirm that you have the correct power level. It is not connected to the mixer. The readings that you are getting when you connect the meter to the input port of the mixer are normal (screwed up). Basically confirm that you do have +7 dbm of power, connect it to the mixer, and then forget about it. By the way don't be afraid to call mini circuits, theyare quite helpful.
jim
wa2njv

760. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <86of9c$5uv8o$1@rn.area.com>
Source record: 63765

In article <388f3e59.26022646@news.mindspring.com>,
<ae4jy@mindspring.com> wrote:
>Am trying to get a MiniCircuits SBL-1 mixer working for a high level
>signal application and am having trouble getting +7dBm into the LO
>port. The RF and IF ports are terminated with 50 Ohms.
>I thought the LO impedence was 50 ohms but appears to be closer to 15
>Ohms at 4MHz and also is very non linear. I found an app note with a

This topic is very confusing and annoyed me so much that I eventually
decided to investigate it and get to the bottom of it. Basically,
the "official" answer is that you need to drive the LO port from a
50 ohm source with available power of +7 dBm. You are correct that
the impedance is much lower than 50 ohms and non-linear. So don't
try to look at the LO voltage to figure out if you have enough drive.
It will simply saturate at about .6V P-P due to diode turn-on voltage.
You can get an idea of how much drive you have by measuring the
current. It turns out that at the "official" drive level, the
current will be 30 mA P-P (counting just the fundamental frequency,
and ignoring harmonics).

If you want to "civilize" the LO port, put a series resonant LC
tank in series with it, with the reactance of the L and C around
150 ohms (not critical as long as it resonates at the LO frequency).
Then the source will see a linear non-time varying impedance of
25 ohms or so. If you want, you can then transform this to 50 ohms.
The series tank will make both the source and the mixer "happier"
although things will work OK without it obviously.

Also, you don't lose much conversion efficiency even at +4 dBM LO
drive and the mixer will be usable with higher loss to around +1 dBm
so in all likelihood, you are OK right now. You can also overdrive
the mixer by 10 dB with no harm.

Rick Karlquist N6RK
rick@area.com

>table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
>assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
>My 50 Ohm signal generator tops out at +18dBm and it still will not
>drive the LO port to 1.4vp-p.
>What am I missing?
>
>Any thoughts on using the AD831 mixer and is it tempermental? Aside
>from it's price and noise figure, it's specs look a lot better than
>the diode mixers.
>

>thanks,
>Moe, ae4jy
>

761. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <86p1hsskq1@nnrp1.deja.com>
Source record: 63766

In article <388f3e59.26022646@news.mindspring.com>,
ae4jy@mindspring.com wrote:
> Am trying to get a MiniCircuits SBL-1 mixer working for a high level
> signal application and am having trouble getting +7dBm into the LO
> port. The RF and IF ports are terminated with 50 Ohms.
> I thought the LO impedence was 50 ohms but appears to be closer to 15
> Ohms at 4MHz and also is very non linear. I found an app note with a
> table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
> assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
> My 50 Ohm signal generator tops out at +18dBm and it still will not
> drive the LO port to 1.4vp-p.
> What am I missing?

When I was doing this sort of thing some time ago, I simply checked the
voltage across a 51 ohm resistor with a scope, and assumed that this
would be correct for the mixer input.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

762. Re: homebrew qrp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Bill <blazureNOblSPAM@wstm.com.invalid>
Message-ID: <07efa1ad.e3d2f9fa@usw-ex0107-042.remarq.com>
Source record: 63767

In article <20000124100824.00361.00000033@ng-ch1.aol.com>,
kd5fxt@aol.com (Kd5fxt) wrote:
> I would like to build a homebrew qrp from "scratch"... any
> resources or info
> would be greatly appreciated. Pse email info.
> tnx
> Bill

Bill,

Go to the QRP-ARCI homepage. Follow the links to QRP-L. Memebers
of theat list are always talking about homebrewing entire rigs from
scratch. This spring, they released a magazine that showed plans to
make en entire 40 mtr transceiver (superhet) using nothing but 2N2222s
as the active devices. No PCB either. just connections to pads glued
to a copper substrate.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

763. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Bill <blazureNOblSPAM@wstm.com.invalid>
Message-ID: <05a4d7f6.e27e9390@usw-ex0107-042.remarq.com>
Source record: 63768

Go to http://www.labcenter.co.uk look for "ARES Lite". It's a small
PCB artwork designer. Works quite well. The demo will allow 100 pins
(built a small keyer on the demo), but the full-blown version has
unlimited pins.
Costs $35. Use their East Coast distributor he gave me my
registration number over the phone.
Not an employee, shareholder, or an associate. Just a VERY
satisfied customer.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

764. Re: Shaft couplers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Corky <corkyNOcoSPAM@myremarq.com.invalid>
Message-ID: <0d7aa2cb.ebbb0db4@usw-ex0102-009.remarq.com>
Source record: 63769

www.smallparts.com

Small Parts Inc.
13980 NW 58th Court
Miami Lakes Fla 33014

They have shaft couplers of all types, gears, plastic/phenolic sheet
tools, nuts bolts screws of different materials, small diameter tubing
metal sheet,rod,angle etc... in brass copper aluminum, all kinds of nice
goodies for the home brewer. Get their catalog

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

765. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <86pm9i$5vts4$1@rn.area.com>
Source record: 63770

In article <388FD8D4.5D45BEC1@source.net>,
Dana Myers K6JQ <dana@source.net> wrote:
>
>
>While I can't point at a huge deal of experience to support my beliefs,
>I'm inclined to avoid reactances at any diode mixer port (especially the
>IF but the LO as well). My suggestion is to use a resistive attenuator at
>the LO port and increase the LO drive appropriately. In other words,
>if you want +7dBm of LO drive, and use a -6dB attenuator, the LO would
>be designed to produce +13dBm into a 50 ohm load.
>
>Dana

There is a distinction between the LO port and the RF/IF ports. The RF/IF port terminations are an important issue and as you say the safest thing to do is resistively terminate then. You wouldn't want to put a tank circuit on one of them unless you were attempting some trick like reflecting back the image to improve the conversion loss (which can be made to work). OTOH, the source impedance used to drive the LO port is an entirely different discussion. In this case, if you have good LO isolation specs on the mixer, there will be no significant mixer products at the LO port so you don't need to worry about how they are terminated. In my experience, mixers work better if the LO source is a current source. IMHO, there is no justification for padding down the LO input with a 6 db attenuator unless there is a long cable between the source and the mixer and the source match is poor.

Rick Karlquist N6RK
www.karlquist.com

766. crystals needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: frank@sirius.ccii.unipi.it
Message-ID: <86ppcs$1at$1@pisanino.unipi.it>
Source record: 63771

Hello,
I'm looking for crystals for 10B,10C and 12 meters band of a yeasu ft-707
rtx which has been modified for 11 meters. As far as I know the values
of those crystal should be the same of those on ft-101 rigs.
The exact frequencies are:

12 38.9875
10B 42.9875
10C 43.4875

(frequencies in MHz).

Mail me for answers.

best 73

Francesco IW8QPI

767. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: mwheatle@trsystems.com
Message-ID: <38906f37.6914392@nntp.news.netcom.net>
Source record: 63772

Thanks for all the replies on the SBL-1. Am sure i will have more questions as this project unfolds.

The Analog Devices AD831 still looks pretty good especially the 1 dB compression level.

moe, ae4jy

768. I Want to make 2M repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <38908bd8@news.marun.edu.tr>
Source record: 63773

Hi
I want to make 2M repeater
Do you know any web adres interesting
with home made repeaters circuits ?
73`s de TA2AD Sua

769. Re: TESTING

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Lou Fisher <hummbar@pacbell.net>
Message-ID: <389089C5.41FA9CF@pacbell.net>
Source record: 63774

DISREGARD THIS IS A TESST

770. Re: I Want to make 2M repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <3890930d.1894863@news.thegrid.net>
Source record: 63775

Give this one a try> http://www.magicrepeater.org

On Thu, 27 Jan 2000 20:08:45 +0200, "ta2ad" <ta2ad@yahoo.com> wrote:

>Hi
>I want to make 2M repeater
>Do you know any web adres interesting
>with home made repeaters circuits ?
>73`s de TA2AD Sua
>
>

The kf6foz BBS
http://www.qsl.net/kf6foz/

771. Re: I Want to make 2M repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38909442.2204079@news.thegrid.net>
Source record: 63776

Here is another one that I think has a little better resources.

http://www.cdi2.com/build_it/

On Thu, 27 Jan 2000 20:08:45 +0200, "ta2ad" <ta2ad@yahoo.com> wrote:

>Hi
>I want to make 2M repeater
>Do you know any web adres interesting
>with home made repeaters circuits ?
>73`s de TA2AD Sua
>
>

The kf6foz BBS
http://www.qsl.net/kf6foz/

772. 2 meter repeater

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38909cdf.4409356@news.thegrid.net>
Source record: 63777

Here is a site for you to check

Amateur Repeater Builders Homepage

http://www.cdi2.com/build_it/

73 de kf6foz
The kf6foz BBS
http://www.qsl.net/kf6foz/

773. Directional high-gain DX-antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Ash <ash@vvv.tf>
Message-ID: <3890AB0D.441019E6@vvv.tf>
Source record: 63778
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hey
Could use a few opinions on good directional narrowbeam antennas
for DX'ing only, mostly interested in L-band antennas, from 1200-1500.
Okey people say Helix's aint good, but for DX'ing I've read on several
places that it's good,
I guess most people will say yagis, well of course, but I'm looking into
every possible way.
Anyone have design plans on 23cm-yagis and phasing them?
Parabolic dish and feedhorn would be nice, but big dishes are hard to
comeby here in sweden.
Thanks

//Ash

774. Re: Directional high-gain DX-antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <3890B007.66F6F411@bellsouth.net>
Source record: 63779
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Ash wrote:

> Hey
> Could use a few opinions on good directional narrowbeam antennas
> for DX'ing only, mostly interested in L-band antennas, from 1200-1500.
> Okey people say Helix's aint good, but for DX'ing I've read on several
> places that it's good,
> I guess most people will say yagis, well of course, but I'm looking into
> every possible way.
> Anyone have design plans on 23cm-yagis and phasing them?
> Parabolic dish and feedhorn would be nice, but big dishes are hard to
> comeby here in sweden.
> Thanks
>
> //Ash

Helicals trade gain for bandwidth- so if you are looking for max gain/boom length, helicals are not your choice. In addition, you would need to have at least a pair, assuming you want to generate linear polarity.
Loop yagis (look at Directive Systems) do well. You would not need a very big dish to generate as much gain as a pair of long yagis- 1.5 meters or so, and the dish could be used on other freqs by changing feeds.

Dale W4OP

775. TEST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Lou Fisher <hummbar@pacbell.net>
Message-ID: <3890B4C1.A8E2EF1E@pacbell.net>
Source record: 63780

IGNORE THIS TEST

776. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: nh7t@qsl.net
Message-ID: <3890B025.9DFE1E67@qsl.net>
Source record: 63781

sorry for the typo, 100x80mm is correct, half euro card..
tnx for correction..
73, rico

--
NH7T/DF2CK
ICQ#: 37922750

777. FS: G.E. 0-100 MILLIAMPERES RF METER W/REMOTE QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Lou Fisher <hummbar@pacbell.net>
Message-ID: <3890C82A.A2ACD970@pacbell.net>
Source record: 63782

NEW OLD STOCK PERFECT CONDITION
0-100 MA RF PANEL METER METER USES A REMOTE SENDER TO
MEASURE RF. SENSOR CAN BE MOUNTED AT RF SOURCE (ELIMANATING SHIELDING
PROBLEMS). THIS WOULD MAKE AN IDEAL POWER METER FOR THAT QRP RIG.
Meter and Sensor Comes Packaged in Original Sealed Box
From Day of Manufacture, with Template and Mouniting Screws Meter
Face Size is 2 1/2" .Mounting Hole Size is 2'.
PRICE $10.00 Plus Postage $3.50 Priority Mail USPS.(United States
Postal Service}
Pictures can be Viewed At:
http://www.angelfire.com/ca2/kl0e/GE100mAMPRF.jpg
http://www.angelfire.com/ca2/kl0e/GE100mAMPRFsender.jpg
Interested ? Please Respond By Email
Thank You
Lou Fisher
email - hummbar@pacbell.net

778. FT890 & CW FAULT ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: digi <dave@omens.freeserve.co.uk>
Message-ID: <86qhbnpbc1@newsg4.svr.pol.co.uk>
Source record: 63783

Hi thanks for reading ,

i have a fault with my ft890 in cw mode it will only
produce milliwatts of power,the radio works well though
in every other mode .

anybody have the info on which pre-set controls the cw gain
or any other info on this problem would be a great help
i do have the schematics for the radio ,but not
the sevice manual .

thanks in advance

dave mw5adj

779. MX-20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <4N4k4.513$LE.38159@news.corecomm.net>
Source record: 63784

Who was it that was looking for pin out info on a MX20 rf power module?
Please e-mail me at alforo@megsinet.net

780. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Yvon <rextel@naples.infi.net>
Message-ID: <3890E7C8.A99DD964@naples.infi.net>
Source record: 63785

Hello! Recently, I was experimenting with a 7 DBM mixer at 57 Mhz. I wanted to keep the LO level to the lowest value because the 57 Mhz signal and its harmonics were leaking into other parts of the design. I adjusted the source to 7 DBM into a 50 ohm resistor and also measured the voltage across the 50 ohm resistor; then I connected the source to the mixer, but the voltage was quite different. I wanted to experiment more but did not have time. The next thing that I want to experiment when time is available is to put a series resistor of let say 5 ohms in series with the input of the LO port and connect a
balanced transformer across the 5 ohm resistor and read the voltage on a spectrum analyzer.As the LO level increases, the voltage should start to increase more rapidly when the diodes in the mixer are conducting. It should also be possible to use a toroid core to make a current transformer with only a one turn primary connected in series with the mixer. Overdriving such a mixer at the LO port can raise problems if sensitive radio-frequency circuits are close to the driving circuits which can produce very high level of harmonics. Regards!

Leon Heller wrote:

> In article <388f3e59.26022646@news.mindspring.com>,
> ae4jy@mindspring.com wrote:
> > Am trying to get a MiniCircuits SBL-1 mixer working for a high level
> > signal application and am having trouble getting +7dBm into the LO
> > port. The RF and IF ports are terminated with 50 Ohms.
> > I thought the LO impedence was 50 ohms but appears to be closer to 15
> > Ohms at 4MHz and also is very non linear. I found an app note with a
> > table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
> > assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
> > My 50 Ohm signal generator tops out at +18dBm and it still will not
> > drive the LO port to 1.4vp-p.
> > What am I missing?
>
> When I was doing this sort of thing some time ago, I simply checked the
> voltage across a 51 ohm resistor with a scope, and assumed that this
> would be correct for the mixer input.
>
> Leon
> --
> Leon Heller, G1HSM
> Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
> Email: leon_heller@hotmail.com
> Web: http://www.geocities.com/SiliconValley/Code/1835
>
> Sent via Deja.com http://www.deja.com/

> Before you buy.

781. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3890E14D.748A@pop.removethistomailme.net>
Source record: 63786

Yvon wrote:
>
> Hello! Recently, I was experimenting with a 7 DBM mixer at 57 Mhz. I wanted
> to keep the LO level to the lowest value because the 57 Mhz signal and its
> harmonics were leaking into other parts of the design. I adjusted the source
> to 7 DBM into a 50 ohm resistor and also measured the voltage across the 50
> ohm resistor; then I connected the source to the mixer, but the voltage was
> quite different. I wanted to experiment more but did not have time. The next
> thing that I want to experiment when time is available is to put a series
> resistor of let say 5 ohms in series with the input of the LO port and
> connect a
> balanced transformer across the 5 ohm resistor and read the voltage on a
> spectrum analyzer.As the LO level increases, the voltage should start to
> increase more rapidly when the diodes in the mixer are conducting. It should
> also be possible to use a toroid core to make a current transformer with
> only a one turn primary connected in series with the mixer. Overdriving such
> a mixer at the LO port can raise problems if sensitive radio-frequency
> circuits are close to the driving circuits which can produce very high level
> of harmonics. Regards!
>
> Leon Heller wrote:
>
> > In article <388f3e59.26022646@news.mindspring.com>,
> > ae4jy@mindspring.com wrote:
> > > Am trying to get a MiniCircuits SBL-1 mixer working for a high level
> > > signal application and am having trouble getting +7dBm into the LO
> > > port. The RF and IF ports are terminated with 50 Ohms.
> > > I thought the LO impedence was 50 ohms but appears to be closer to 15
> > > Ohms at 4MHz and also is very non linear. I found an app note with a
> > > table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
> > > assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
> > > My 50 Ohm signal generator tops out at +18dBm and it still will not
> > > drive the LO port to 1.4vp-p.
> > > What am I missing?
> >
> > When I was doing this sort of thing some time ago, I simply checked the
> > voltage across a 51 ohm resistor with a scope, and assumed that this
> > would be correct for the mixer input.
> >
> > Leon
> > --
> > Leon Heller, G1HSM
> > Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
> > Email: leon_heller@hotmail.com

> > Web: http://www.geocities.com/SiliconValley/Code/1835
> >
> > Sent via Deja.com http://www.deja.com/
> > Before you buy.

That's fundamentally a problem with shielding, though, not LO drive.
Backing off on your LO drive is not a smart way to deal with leakage.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

782. FS: G.E. 0-100 MILLIAMPERES RF METER W/REMOTE QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Lou Fisher <hummbar@pacbell.net>
Message-ID: <3890FDB5.282BA4DC@pacbell.net>
Source record: 63787

NEW OLD STOCK PERFECT CONDITION
0-100 MA RF PANEL METER METER USES A REMOTE SENDER TO
MEASURE RF. SENSOR CAN BE MOUNTED AT RF SOURCE (ELIMANATING SHIELDING

PROBLEMS). THIS WOULD MAKE AN IDEAL POWER METER FOR THAT QRP RIG.
Meter and Sensor Comes Packaged in Original Sealed Box
From Day of Manufacture, with Template and Mouniting Screws Meter
Face Size is 2 1/2" .Mounting Hole Size is 2'.
PRICE $10.00 Plus Postage $3.50 Priority Mail USPS.(United States
Postal Service}
Pictures can be Viewed At:
http://www.angelfire.com/ca2/kl0e/GE100mAMPRF.jpg
http://www.angelfire.com/ca2/kl0e/GE100mAMPRFsender.jpg
Interested ? Please Respond By Email
Thank You
Lou Fisher
email - hummbar@pacbell.net

783. Tubes...Tubes...Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <86r2q6quf1@ruby.mint.net>
Source record: 63788

I have thousands of tubes for sale. E-Mail me with your wants.
gbrown@mint.net
Thank You
Gary

784. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-9F2CCF.21345627012000@news.erols.com>
Source record: 63789
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Right. Actually the answer to your original question is the FCC.

In article <388f79e8.3469233@news.thegrid.net>,
cobrano-spam@budweiser.com (kf6foz) wrote:

> Of course they have. 11-meters is an HF band.
>
> On Wed, 26 Jan 2000 14:53:50 -0500, Steve
> <amradio@thebizlink.com.removethis> wrote:
>
> >CBers have been on HF since day one (late 50's0!!
> >
> >
> >In article <388f1b6a.24498158@news.thegrid.net>,
> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >
> >> Since I do have a radio which goes there and listen on 10 meters half
> >> the time, I have to say that I have heard maybe 3 or 4 CB'ers in that
> >> low segment in the past 3 yrs. However, I have heard more bootleggers
> >> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers to
> >> use The ham portions of HF legally. They usually dont last too long
> >> when they are there and we must remember that other countries sell
> >> radios as CB that cover these bands and may well be another country
> >> you are hearing. While I do admit that there are CB'ers that go there,
> >> I also find that in that segment there SWR is really high and that
> >> deters them from coming back. Another reason I think that FCC doesnt
> >> do too much about CB radio is the fact that DX kind of helps the cb
> >> get away with alot since I know I dont want to travel 3,000 miles to
> >> catch an operator in the act, plus the other countries that operate
> >> legaly in those bands as CB operators kind of help to camouflage the
> >> signals. That is funny about the roger beeps and weird talk.....
> >>
> >> When I asked the question below, I just thought that there was some
> >> news that I didnt hear.
> >>
> >> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
> >> <johnande@nospaminterl.net> wrote:
> >>
> >> >
> >> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
> >> >news:388c51b3.2265222@news.thegrid.net...
> >> >> Who is allowing CB'ers on HF?
> >> >
> >> >

> >> >Listen on low end of ten meters. Lots of cbers there, with their
> >> >roger
> >> >beeps
> >> >and noises and wierd talk.
> >> >
> >> >John Anderson K0BKL
> >> >
> >> >http://www.interl.net/~johnande/
> >> >
> >> >
> >> >
> >> >>
> >> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
> >> >> <vk4nm@hotmail.com> wrote:
> >> >>
> >> >> >Another proof why we should NEVER abandon CW requirement. . It
> >> >> >filters
> >> >> >things like this. Once you allow CBers on HF this is what's gonna
> >> >> >happen.
> >> >> > Well not exactly the same, but kind of ...)
> >> >> >
> >> >
> >> >
> >> >
> >>
> >> http://www.qsl.net/kf6foz/
> >
> http://www.qsl.net/kf6foz/

785. Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-27 00:00:00 UTC
From: Corky <corkyNOcoSPAM@myremarq.com.invalid>
Message-ID: <03676caf.c2c0e65a@usw-ex0107-043.remarq.com>
Source record: 63790

Hi Guys,
I want to etch a large board and leave as much copper as possible as a ground plane. I usually use small boards and let the majority of the copper go, but I want to use a large ground plane on a couple of circs. How do you all cover this large surface to prevent etching?
I have seen commercial products, but know there must be a cheaper way, I have thought about taping or maybe rubber cement. Any ideas will be greatly appreciated. Thank you
ps, I am using ferric chloride etching technique, and generally use dry transfers and laquer pen.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

786. Re: signal one

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Rich Peet <peet@citilink.com>
Message-ID: <Py7k4.8685$v31.932050@ptah.visi.com>
Source record: 63695

Tanks, will respond direct to you.

"Jei xray" <jeixray@aol.com> wrote in message
news:20000126224009.14649.00000144@ng-cc1.aol.com...
> I have one of these radios as my main radio in my station. I have all of
the
> mods etc that were published in the user group club that at one time
existed. I
> do not have the plate choke but i probably could measure mine and let you
know
> the inductance etc. If i can be of help let me know.
>
> jim
> wa2njv

787. Re: 532 pf poly-film v-caps.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <4G7k4.139$%r3.7754@typhoon1.gnilink.net>
Source record: 63696

REDUCE PRICES TO $10.00 / pr. caps., and $12.00 / wire-cap. combo..

K3FDY wrote in message ...
>Hard-to-find, 20 mm, 266 pf x 2 poly-film tuning caps. w. trimmer pkg.. 2
>for $12.00 ,
>or 100 ft. polyethylene ins. #24 ga. stranded wire and one cap for $13.00
>Free shipping to U.S.A. address.
>
>Ed Wawzinski, K3FDY
>622 Deer Park Ave.
>Oakland, MD 21550
>
>

788. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <389101ed.1879120@news.thegrid.net>
Source record: 63697
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Just how is the FCC giving it away? The last time I checked, The
license structure is still in tact, thus it isn't being given away.
If ham radio was going to turn into CB, It would have done it years
ago when the no-code tech license was invented. As for some on ham
radio that allready treat it like CB, They need to be dealt with so it
isnt inviting for those. Address the current problem, then deal with
what is up and coming.

73, kf6foz

On Thu, 27 Jan 2000 21:34:56 -0500, Steve
<amradio@thebizlink.com.removethis> wrote:

>Right. Actually the answer to your original question is the FCC.
>
>
>
>In article <388f79e8.3469233@news.thegrid.net>,
>cobrano-spam@budweiser.com (kf6foz) wrote:
>
>> Of course they have. 11-meters is an HF band.
>>
>> On Wed, 26 Jan 2000 14:53:50 -0500, Steve
>> <amradio@thebizlink.com.removethis> wrote:
>>
>> >CBers have been on HF since day one (late 50's0!!
>> >
>> >
>> >In article <388f1b6a.24498158@news.thegrid.net>,
>> >cobrano-spam@budweiser.com (kf6foz) wrote:
>> >
>> >> Since I do have a radio which goes there and listen on 10 meters half
>> >> the time, I have to say that I have heard maybe 3 or 4 CB'ers in that
>> >> low segment in the past 3 yrs. However, I have heard more bootleggers
>> >> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers to
>> >> use The ham portions of HF legally. They usually dont last too long
>> >> when they are there and we must remember that other countries sell
>> >> radios as CB that cover these bands and may well be another country
>> >> you are hearing. While I do admit that there are CB'ers that go there,
>> >> I also find that in that segment there SWR is really high and that
>> >> deters them from coming back. Another reason I think that FCC doesnt
>> >> do too much about CB radio is the fact that DX kind of helps the cb
>> >> get away with alot since I know I dont want to travel 3,000 miles to
>> >> catch an operator in the act, plus the other countries that operate

>> >> legaly in those bands as CB operators kind of help to camouflage the
>> >> signals. That is funny about the roger beeps and weird talk.....
>> >>
>> >> When I asked the question below, I just thought that there was some
>> >> news that I didnt hear.
>> >>
>> >> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
>> >> <johnande@nospaminterl.net> wrote:
>> >>
>> >> >
>> >> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
>> >> >news:388c51b3.2265222@news.thegrid.net...
>> >> >> Who is allowing CB'ers on HF?
>> >> >
>> >> >
>> >> >Listen on low end of ten meters. Lots of cbers there, with their
>> >> >roger
>> >> >beeps
>> >> >and noises and wierd talk.
>> >> >
>> >> >John Anderson K0BKL
>> >> >
>> >> >http://www.interl.net/~johnande/
>> >> >
>> >> >
>> >> >
>> >> >>
>> >> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
>> >> >> <vk4nm@hotmail.com> wrote:
>> >> >>
>> >> >> >Another proof why we should NEVER abandon CW requirement. . It
>> >> >> >filters
>> >> >> >things like this. Once you allow CBers on HF this is what's gonna
>> >> >> >happen.
>> >> >> > Well not exactly the same, but kind of ...)
>> >> >> >
>> >> >
>> >> >
>> >> >
>> >> >
>> >>
>> >> http://www.qsl.net/kf6foz/
>> >>
>> http://www.qsl.net/kf6foz/

The kf6foz BBS
http://www.qsl.net/kf6foz/

789. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: "Barry L. Ornitz" <ornitz@NOSPAM.tricon.net>
Message-ID: <Y7ak4.329$ox5.63319@tw11.nn.bcandid.com>
Source record: 63698

Brad Thompson wrote in message <388FB588.82104080@valley.net>...

{I am not sure why this reply appeared three times.}

>Actually, Barry is correct; I'm guilty of oversimplification in
>stating that "Teflon" (Dupont's trademark) necessarily requires
>silver-plated wire for oxidation resistance during processing.
>
>There are many variants of fluorocarbons, of which Gore's PTFE is
>one, Teflon FEP is another and Tefzel (ETFE) is yet another. All
>feature different insulating and chemical properties, and all
>probably require dfferent extrusion techniques.

To be correct here, the word Teflon, when used alone to describe a polymer, _is_ PTFE, or polytetrafluoroethylene. Gore is the world's largest customer for DuPont's PTFE resins. Because Gore also buys PTFE from non-DuPont sources (ICI, Daikin, etc.), they use the generic polymer name. Gore also uses lesser amounts of FEP, PFA, etc.

FEP is a copolymer of tertafluoroethylene and hexafluoropropylene. It is melt processable while PTFE is not. The service temperature of FEP is lower than that of PTFE. Other fluorocarbon polymers include PFA (perfluoroalkoxy), ECTFE (ethylene chlorotrifluoroethylene copolymer, Kel-F, Halar), PVDF (polyvinylidene difluoride, Kynar), and ETFE (ethylene trifluoroethylene block copolymer, Tefzel).

Kynar and Tefzel have been used extensively in wire-wrap wire insulation. Some FEP and PFA are also used in specialty wire insulations (while they have a lower maximum use temperature and less chemical resistance than PTFE, some variations have a better crush resistance and optical clarity). Note, however, that these are not called simply Teflon.

>Quoting from a 1985 copy of AT&T's Electronic Wire and Cable
>manual (their publication no. 510-134):
>"...Tefzel requires the use of either a nickel-or silver-plated
>conductor because bare copper wire cannot withstand the degree
>of heat necessary to process and extrude Tefzel...."

>Gore's processes may have rendered Tefzel obsolete, but there are
>plenty of fluorocarbon insulations available to trap the
>careless<g>.

No Tefzel is not obsolete, it is just a different material than Teflon. And the Gore processes for producing PTFE insulated wire

are quite similar to those used by other companies too. PTFE is an unusual material that cannot be processed by conventional molding or extrusion methods. While some references may list a melting point for PTFE, it really has none. The temperature listed is that at which all crystallinity in the material disappears. Even above this temperature, the melt viscosity is too high for practical processing (and the polymer begins decomposition at these temperatures too).

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

790. Newbie Help?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Matt Donohoe <therelic@dingoblue.net.au>
Message-ID: <86rua9nqj1@news1.mpx.com.au>
Source record: 63699
Cross-posted to: aus.radio.amateur.digital,aus.radio.amateur.misc,rec.radio.amateur.homebrew

Hello,

As my previous message says, I am looking for designs for those devices, I am really really looking for a transciever or a transmitter/reciever pair that would be able to have a output at 144MHz or 28MHz.... As this would really help for later transverter interfacing....

Would somebody be able to offer me a website that would have construction plans for a few basic digital packet radio devices?

Like a transciever(or transmitter/reciever pair), packet modem, TNC or something like that

I'm interested in getting into designing my own hardware but as any newbie have no place to start. Private Reply would be most appreciated...

therelic@dingoblue.net.au

791. help abt article on DC receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: f6crp <f6crp@wanadoo.fr>
Message-ID: <86rvovfub1@wanadoo.fr>
Source record: 63700

Hello all,
I believe that ZS6BZP described this year or last year, on a British review (perhaps RadCom?) a direct conversion receiver using a 74HC4066 like mixer. Could somebody scan the schematic and send it to me , more particularly the part mixer?
Thank you in advance
73 Denis F6CRP
f6crp@wanadoo.fr (e-mail)

http://perso.wanadoo.fr/f6crp/ (homepage, my english is vy bad but you can find all the site in your language !)

792. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <86s3iqcbn1@bgtnsc03.worldnet.att.net>
Source record: 63701

I have used enamel paint applied with a small paintbrush.

--
Mike Knowlton
Panama City Fl.

793. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: W2EB <n2tpaNOn2SPAM@juno.com.invalid>
Message-ID: <202784de.4fa74dad@usw-ex0102-011.remarq.com>
Source record: 63702

Corky,

Get an old bottle of nail polish. Paint the unetched areas. I've
done this to an entire side of a double-sided board. Works perfectly,
but let it dry THOROUGHLY before you etch.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

794. Re: 900 Megahertz Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <3891AA8C.16EB@mad.scientist.com>
Source record: 63703

consultant@representative.com wrote:
>
> Anyone ever successfully add an outside antenna to their portable 900 MHz phone?
>
> Thanks.
>
depends on the phone
i've got a motorola flip phone and an external solution was offered
for my model. works fine w/noticeable improvement on the fringe of
portable coverage.

--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

795. Re: 900 Megahertz Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: "Dana H. Myers K6JQ" <Dana@Source.Net>
Message-ID: <3891AE79.B4AE9109@Source.Net>
Source record: 63704
Body handling: Binary attachment payload not displayed: Dana.vcf

WebMonkey wrote:

> consultant@representative.com wrote:
> >
> > Anyone ever successfully add an outside antenna to their portable 900 MHz phone?
> >
> > Thanks.
> >
> depends on the phone
> i've got a motorola flip phone and an external solution was offered
> for my model. works fine w/noticeable improvement on the fringe of
> portable coverage.

I'm tempted to add an antenna to my ATT 9520 (aka HS-8500). The
base unit actually has a short of coax from the PCB to the (apparently
resonant) built-in antenna. At a power level of approximately +24dBm,
I suspect I could even add a decent omni with a short run of coax and
remain inside scope of Part 15 (though I want to re-read it sometime
and verify this).

As it stands, that phone almost scares me how much power it runs. Certainly,
it has the best range of any cordless phone I've owned (and a fairly short
battery life!).

Dana K6JQ

[One or more binary attachments are retained only in the source text.]

796. IC's for Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Clif Holland <clif@avvid.com>
Message-ID: <3891B3B8.661D@avvid.com>
Source record: 63705
Cross-posted to: rec.radio.amateur.homebrew,misc.industry.electronics.marketplace,science.electronics.equipment

Make me an offer on all or part of the following list.

NO ONESY/TWOSY. Minimum on IC's is a tube or actual quantity.

All offers are plus shipping

All Items are NOS(New Old Stock)

QTY P/N QTY P/N
4 1016-CJ8 135 2N2907A
50 26LS31 67 2N5179
62 26LS32 78 2N7000
8 2716A 24 2N918
16 68HCP11A1 379 3N204
75 74F04
38 74F161
39 74F403
79 74F74 14 4.9152 MHZ XTAL
83 74HC138 40 80 MHZ XTAL
50 74HC30 23 8MHZ XTAL
41 74HC373 35 96.125 MHZ XTAL
19 74HC386
4 74HC4020
14 74HC74
40 74HCO4 625 BB505B DIODE
45 74HCT73 2425 BB609B DIODE
18 74HCT74 80 MBD501 DIODE
11 74LS00
74 74LS02
75 74LS04 Mini-Circuits Products
79 74LS08 24 PAS-1
31 74LS138 50 PSC2-1
139 74LS151 17 SBL-1 MIXER
140 74LS153 1 SRA-1H MIXER
185 74LS158 13 T4-1
142 74LS161 35 TM04-1
50 74LS164
112 74LS166 IPI Cambion Gold Pins .040 QTY 3564
175 74LS20 IPI Cambion Gold Sockets .040 QTY 115
52 74LS240
94 74LS244
100 74LS273
165 74LS30
92 74LS32

45 74LS374
108 74LS682
224 74LS73
525 74LS74
171 74LS96
30 8530-6
46 HA-1-2425-5
217 LF412CN
193 LM311N
45 LM337H
53 LM358N
13 LM393N
42 MC145151P
22 MC145155P
24 MWA120
499 NE555
50 NE564
5 SDA2211
14 TZ9208
--
Clif Holland, KA5IPF
Owner of AVVid, an Authorized Kenwood and Icom Service Center
For more info click on the following
http://www.avvid.com/
or call 1-800-214-5779

797. RE: Ham-Homebrew Digest V2000 #28

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: fneal@colossus.ORG
Message-ID: <LPBBIKEILCIGCOFBPPPFGEIJCBAA.fneal@colossus.org>
Source record: 63706

Spammer

-----Original Message-----
From: Ham-Homebrew Mailing List and Newsgroup
[mailto:Ham-Homebrew@ucsd.edu]
Sent: Friday, January 28, 2000 6:31 AM
To: Ham-Homebrew@ucsd.edu
Subject: Ham-Homebrew Digest V2000 #28

Ham-Homebrew Digest Fri, 28 Jan 2000 Volume 2000 : Issue 28

Today's Topics:
4-1000 amplifier plans
cancel <3890B4C1.A8E2EF1E@pacbell.net>
cancel <3890E88A.7027D79A@pacbell.net>
Determining SBL-1 Mixer LO Power level (3 msgs)
Directional high-gain DX-antennas (2 msgs)
FS: G.E. 0-100 MILLIAMPERES RF METER W/REMOTE QRP (2 msgs)
Interface David Clarks to transceiver?
Manual for Traffic TK-7270
Need Source of single chip FM rcvr
Shaft couplers
Silver-plated Teflon wire.
Tubes...Tubes...Tubes

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-homebrew".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.
Loop-Detect: Ham-Homebrew:2000/28

Date: 28 Jan 2000 01:21:19 GMT
From: wb4lnm@aol.com (WB4LNM)
Subject: 4-1000 amplifier plans

>does anyone have a construction article for a 80-10meter amp any help would
>be appreciated thanks and 73 please e-mail wr4f1@juno.com

If you have any way of solving the 10 meter matching problem with the
4-1000,

I'd be interested to know your solution.

John...
WB4LNM

John H. Klingelhoeffer
WB4LNMxx@aol.com (remove xx for real address)
.

Date: Thu, 27 Jan 2000 16:09:30 -0800
From: Lou Fisher <hummbar@pacbell.net>
Subject: cancel <3890B4C1.A8E2EF1E@pacbell.net>

This message was cancelled from within Mozilla.
.

Date: Thu, 27 Jan 2000 18:24:24 -0800
From: Lou Fisher <hummbar@pacbell.net>
Subject: cancel <3890E88A.7027D79A@pacbell.net>

This message was cancelled from within Mozilla.
.

Date: Thu, 27 Jan 2000 18:10:07 GMT
From: mwheatle@trsystems.com (Moe)
Subject: Determining SBL-1 Mixer LO Power level

Thanks for all the replies on the SBL-1. Am sure i will have more
questions as this project unfolds.

The Analog Devices AD831 still looks pretty good especially the 1 dB
compression level.

moe, ae4jy
.

Date: Thu, 27 Jan 2000 19:50:18 -0500
From: Yvon <rextel@naples.infi.net>
Subject: Determining SBL-1 Mixer LO Power level

Hello! Recently, I was experimenting with a 7 DBM mixer at 57 Mhz. I wanted
to keep the LO level to the lowest value because the 57 Mhz signal and its
harmonics were leaking into other parts of the design. I adjusted the source
to 7 DBM into a 50 ohm resistor and also measured the voltage across the 50
ohm resistor; then I connected the source to the mixer, but the voltage was
quite different. I wanted to experiment more but did not have time. The next
thing that I want to experiment when time is available is to put a series

resistor of let say 5 ohms in series with the input of the LO port and
connect a
balanced transformer across the 5 ohm resistor and read the voltage on a
spectrum analyzer.As the LO level increases, the voltage should start to
increase more rapidly when the diodes in the mixer are conducting. It should
also be possible to use a toroid core to make a current transformer with
only a one turn primary connected in series with the mixer. Overdriving such
a mixer at the LO port can raise problems if sensitive radio-frequency
circuits are close to the driving circuits which can produce very high level
of harmonics. Regards!

Leon Heller wrote:

> In article <388f3e59.26022646@news.mindspring.com>,
> ae4jy@mindspring.com wrote:
> > Am trying to get a MiniCircuits SBL-1 mixer working for a high level
> > signal application and am having trouble getting +7dBm into the LO
> > port. The RF and IF ports are terminated with 50 Ohms.
> > I thought the LO impedence was 50 ohms but appears to be closer to 15
> > Ohms at 4MHz and also is very non linear. I found an app note with a
> > table showing a VSWR of around 3.5 at 1 MHz. The RF books I have
> > assume the LO port is 50 Ohms and just say set the voltage to 1.4Vp-p.
> > My 50 Ohm signal generator tops out at +18dBm and it still will not
> > drive the LO port to 1.4vp-p.
> > What am I missing?
>
> When I was doing this sort of thing some time ago, I simply checked the
> voltage across a 51 ohm resistor with a scope, and assumed that this
> would be correct for the mixer input.
>
> Leon
> --
> Leon Heller, G1HSM
> Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
> Email: leon_heller@hotmail.com
> Web: http://www.geocities.com/SiliconValley/Code/1835
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

.

Date: Thu, 27 Jan 2000 17:22:37 -0700
From: John Miles <jmiles@pop.removethistomailme.net>
Subject: Determining SBL-1 Mixer LO Power level

Yvon wrote:
>
> Hello! Recently, I was experimenting with a 7 DBM mixer at 57 Mhz. I
wanted

> to keep the LO level to the lowest value because the 57 Mhz signal and its
> harmonics were leaking into other parts of the design. I adjusted the
source
> to 7 DBM into a 50 ohm resistor and also measured the voltage across the
50
> ohm resistor; then I connected the source to the mixer, but the voltage
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> a mixer at the LO port can raise problems if sensitive radio-frequency
> circuits are close to the driving circuits which can produce very high
level
> of harmonics. Regards!
>
> Leon Heller wrote:
>
> > In article <388f3e59.26022646@news.mindspring.com>,
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> > When I was doing this sort of thing some time ago, I simply checked the
> > voltage across a 51 ohm resistor with a scope, and assumed that this
> > would be correct for the mixer input.
> >
> > Leon
> > --
> > Leon Heller, G1HSM
> > Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
> > Email: leon_heller@hotmail.com
> > Web: http://www.geocities.com/SiliconValley/Code/1835
> >

> > Sent via Deja.com http://www.deja.com/
> > Before you buy.

That's fundamentally a problem with shielding, though, not LO drive.
Backing off on your LO drive is not a smart way to deal with leakage.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

.

Date: Thu, 27 Jan 2000 20:30:14 GMT
From: Ash <ash@vvv.tf>
Subject: Directional high-gain DX-antennas

Hey
Could use a few opinions on good directional narrowbeam antennas
for DX'ing only, mostly interested in L-band antennas, from 1200-1500.
Okey people say Helix's aint good, but for DX'ing I've read on several
places that it's good,
I guess most people will say yagis, well of course, but I'm looking into
every possible way.
Anyone have design plans on 23cm-yagis and phasing them?
Parabolic dish and feedhorn would be nice, but big dishes are hard to
comeby here in sweden.
Thanks

//Ash

.

Date: Thu, 27 Jan 2000 15:52:23 -0500
From: Dale Parfitt <parinc@bellsouth.net>
Subject: Directional high-gain DX-antennas

Ash wrote:

> Hey
> Could use a few opinions on good directional narrowbeam antennas
> for DX'ing only, mostly interested in L-band antennas, from 1200-1500.
> Okey people say Helix's aint good, but for DX'ing I've read on several
> places that it's good,
> I guess most people will say yagis, well of course, but I'm looking into
> every possible way.
> Anyone have design plans on 23cm-yagis and phasing them?
> Parabolic dish and feedhorn would be nice, but big dishes are hard to
> comeby here in sweden.

> Thanks
>
> //Ash

Helicals trade gain for bandwidth- so if you are looking for max gain/boom length, helicals are not your choice. In addition, you would need to have at least a pair, assuming you want to generate linear polarity.
Loop yagis (look at Directive Systems) do well. You would not need a very big dish to generate as much gain as a pair of long yagis- 1.5 meters or so, and the dish could be used on other freqs by changing feeds.

Dale W4OP

.

Date: Thu, 27 Jan 2000 14:35:23 -0800
From: Lou Fisher <hummbar@pacbell.net>
Subject: FS: G.E. 0-100 MILLIAMPERES RF METER W/REMOTE QRP

NEW OLD STOCK PERFECT CONDITION
0-100 MA RF PANEL METER METER USES A REMOTE SENDER TO
MEASURE RF. SENSOR CAN BE MOUNTED AT RF SOURCE (ELIMANATING SHIELDING
PROBLEMS). THIS WOULD MAKE AN IDEAL POWER METER FOR THAT QRP RIG.
Meter and Sensor Comes Packaged in Original Sealed Box
From Day of Manufacture, with Template and Mouniting Screws Meter
Face Size is 2 1/2" .Mounting Hole Size is 2'.
PRICE $10.00 Plus Postage $3.50 Priority Mail USPS.(United States
Postal Service}
Pictures can be Viewed At:
http://www.angelfire.com/ca2/kl0e/GE100mAMPRF.jpg
http://www.angelfire.com/ca2/kl0e/GE100mAMPRFsender.jpg
Interested ? Please Respond By Email
Thank You
Lou Fisher
email - hummbar@pacbell.net

.

Date: Thu, 27 Jan 2000 18:23:50 -0800
From: Lou Fisher <hummbar@pacbell.net>
Subject: FS: G.E. 0-100 MILLIAMPERES RF METER W/REMOTE QRP

NEW OLD STOCK PERFECT CONDITION
0-100 MA RF PANEL METER METER USES A REMOTE SENDER TO
MEASURE RF. SENSOR CAN BE MOUNTED AT RF SOURCE (ELIMANATING SHIELDING

PROBLEMS). THIS WOULD MAKE AN IDEAL POWER METER FOR THAT QRP RIG.
Meter and Sensor Comes Packaged in Original Sealed Box
From Day of Manufacture, with Template and Mouniting Screws Meter
Face Size is 2 1/2" .Mounting Hole Size is 2'.

PRICE $10.00 Plus Postage $3.50 Priority Mail USPS.(United States
Postal Service}
Pictures can be Viewed At:
http://www.angelfire.com/ca2/kl0e/GE100mAMPRF.jpg
http://www.angelfire.com/ca2/kl0e/GE100mAMPRFsender.jpg
Interested ? Please Respond By Email
Thank You
Lou Fisher
email - hummbar@pacbell.net

.

Date: Tue, 25 Jan 2000 15:33:04 GMT
From: w0vne@my-deja.com
Subject: Interface David Clarks to transceiver?

In article <3880799B.A0D2DAC3@suscom.net>,
"Alan D. Wilcox" <awilcox@suscom.net> wrote:
> Hello,
>
> I'd like to use David Clark H10-20 (or the H10-60) headsets with
> ham transceiver. They have electret microphone that needs a DC bias
> voltage applied.
>
> Anyone have a schematic of audio circuit of aviation transmitter? Or
> some thoughts on what circuitry I might kludge together to build
> an interface?
>
> Many thanks,
>
> Alan, W3DVX
Hi Alan. I did this some years ago. I found that you have to power
the mic. Unfortunatly the lash up I created worked fine for some bands
but others had so much RF feedback I put my headset back in my flight
bag. I wish you luck. Please post if yours works without feedback!

Jay W0VNE

w0vne@arrl.net
>

Sent via Deja.com http://www.deja.com/
Before you buy.
.

Date: Tue, 25 Jan 2000 12:36:07 +0000
From: Tom Trumma <"se.liu.lysator"@trum.UCSD.EDU (reverse.address)>
Subject: Manual for Traffic TK-7270

Looking for users manual or info how to program channel freq.
It's a digital FM scanner for low and high band (70/125MHz) early -80s.
Thanks,
Tom trum@lysator.liu.se
.

Date: Tue, 25 Jan 2000 13:46:57 GMT
From: Laura Halliday <va3ldh@sympatico.ca>
Subject: Need Source of single chip FM rcvr

Clifford Buttschardt wrote:

> Yes I know of these manufacturers. I need specific information on chips
> that hams can obtain. It is important to differentiate between hams and
> the users of thousands of chips used in modern manufacturing. Cliff K7RR

The biggest challenge these days is not parts availability, but ham
radio's mental block on the subject. Parts are available. You just
have to dig a bit sometimes.

You can get the Motorola chips in onesies and twosies from folks
like Newark. They don't care if you're a ham or not. All they
care is if you have the money. You will pay a premium for buying
in less than OEM quantities, but that's how the game works nowadays.

A nice minimal parts count FM radio chip is the TDA7000 and offshoots
like TDA7010T (the SMD version). Still current, still readily available.
The last ones I bought came from Mainline (TDA7000) and Electromail
(TDA7010T).

GEC Plessey packed it in years ago. I still have some SL6440 and SL6700
chips in my junkbox. No, they're not for sale. :-)
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet
.

Date: Thu, 27 Jan 2000 06:16:29 -0800
From: Corky <corkyNOcoSPAM@myremarq.com.invalid>
Subject: Shaft couplers

www.smallparts.com

Small Parts Inc.
13980 NW 58th Court
Miami Lakes Fla 33014

They have shaft couplers of all types, gears, plastic/phenolic sheet
tools, nuts bolts screws of different materials, small diameter tubing
metal sheet,rod,angle etc... in brass copper aluminum, all kinds of nice
goodies for the home brewer. Get their catalog

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

.

Date: Fri, 28 Jan 2000 05:51:54 GMT
From: "Barry L. Ornitz" <ornitz@NOSPAM.tricon.net>
Subject: Silver-plated Teflon wire.

Brad Thompson wrote in message <388FB588.82104080@valley.net>...

{I am not sure why this reply appeared three times.}

>Actually, Barry is correct; I'm guilty of oversimplification in
>stating that "Teflon" (Dupont's trademark) necessarily requires
>silver-plated wire for oxidation resistance during processing.
>
>There are many variants of fluorocarbons, of which Gore's PTFE is
>one, Teflon FEP is another and Tefzel (ETFE) is yet another. All
>feature different insulating and chemical properties, and all
>probably require dfferent extrusion techniques.

To be correct here, the word Teflon, when used alone to describe a polymer, _is_ PTFE, or polytetrafluoroethylene. Gore is the world's largest customer for DuPont's PTFE resins. Because Gore also buys PTFE from non-DuPont sources (ICI, Daikin, etc.), they use the generic polymer name. Gore also uses lesser amounts of FEP, PFA, etc.

FEP is a copolymer of tertafluoroethylene and hexafluoropropylene. It is melt processable while PTFE is not. The service temperature of FEP is lower than that of PTFE. Other fluorocarbon polymers include PFA (perfluoroalkoxy), ECTFE (ethylene chlorotrifluoroethylene copolymer, Kel-F, Halar), PVDF (polyvinylidene difluoride, Kynar), and ETFE (ethylene trifluoroethylene block copolymer, Tefzel).

Kynar and Tefzel have been used extensively in wire-wrap wire insulation. Some FEP and PFA are also used in specialty wire insulations (while they have a lower maximum use temperature and less chemical resistance than PTFE, some variations have a better crush resistance and optical clarity). Note, however, that these are not called simply Teflon.

>Quoting from a 1985 copy of AT&T's Electronic Wire and Cable
>manual (their publication no. 510-134):
>"...Tefzel requires the use of either a nickel-or silver-plated
>conductor because bare copper wire cannot withstand the degree
>of heat necessary to process and extrude Tefzel...."

>Gore's processes may have rendered Tefzel obsolete, but there are
>plenty of fluorocarbon insulations available to trap the
>careless<g>.

No Tefzel is not obsolete, it is just a different material than Teflon. And the Gore processes for producing PTFE insulated wire are quite similar to those used by other companies too. PTFE is an unusual material that cannot be processed by conventional molding or extrusion methods. While some references may list a melting point for PTFE, it really has none. The temperature listed is that at which all crystallinity in the material disappears. Even above this temperature, the melt viscosity is too high for practical processing (and the polymer begins decomposition at these temperatures too).

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

.

Date: Thu, 27 Jan 2000 21:44:14 -0500
From: "Gary Brown" <gbrown@mint.net>
Subject: Tubes...Tubes...Tubes

I have thousands of tubes for sale. E-Mail me with your wants.
gbrown@mint.net
Thank You
Gary

.

End of Ham-Homebrew Digest V2000 #28
****

798. Re: help abt article on DC receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2801001310500001@dialup-104.hip.cam.org>
Source record: 63707

In article <86rvovfub1@wanadoo.fr>, "f6crp" <f6crp@wanadoo.fr> wrote:

> Hello all,
> I believe that ZS6BZP described this year or last year, on a British
> review (perhaps RadCom?) a direct conversion receiver using a 74HC4066
> like mixer. Could somebody scan the schematic and send it to me , more
> particularly the part mixer?
> Thank you in advance
> 73 Denis F6CRP
> f6crp@wanadoo.fr (e-mail)
>
> http://perso.wanadoo.fr/f6crp/ (homepage, my english is vy bad but you can
> find all the site in your language !)

He had an article describing such a receiver in the Fall 1998 issue of Communications Quarterly on page 58. It says "reprinted with permission from Electronics World", although it doesn't mention the issue.

I don't have a scanner, so I can't email it. If nobody comes forward in a few days, email me with your address, and I'll photocopy it mail it to you.

Michael VE2BVW

799. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2801001316210001@dialup-104.hip.cam.org>
Source record: 63708

In article <03676caf.c2c0e65a@usw-ex0107-043.remarq.com>, Corky
<corkyNOcoSPAM@myremarq.com.invalid> wrote:

> Hi Guys,
> I want to etch a large board and leave as much copper as possible as a
> ground plane. I usually use small boards and let the majority of the
> copper go, but I want to use a large ground plane on a couple of circs.
> How do you all cover this large surface to prevent etching?
> I have seen commercial products, but know there must be a cheaper way,
> I have thought about taping or maybe rubber cement. Any ideas will be
> greatly appreciated. Thank you
> ps, I am using ferric chloride etching technique, and generally use
> dry transfers and laquer pen.
>
>
I've tended to use double-sided boards, and leave one side unetched. It
gives a good ground plane, but I don't have to worry about weaving big ground
areas around traces on the etched side of the board.

Anyway, I've never had problems using masking tape to mask off the unetched
side of the board.

Electrical tape worked too.

Tape is easy to remove. I've seen lots of schemes over the years, but things
like paint has the problem of removing it afterwards.

Michael VE2BVW

800. Re: RF assistance sought (HF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <%glk4.71619$905.1471085@news5.giganews.com>
Source record: 63709
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Des, I recommend the ARRL Radio Amateur's Handbook as an excellent reference on how these things work.

Further, there is a company (name escapes me at the moment) in the US that manufactures a single chip receiver that requires one crystal and little more to make it operate.

In these days of cellular telephone excitement there are many companies making circuits for transmission and reception at low power levels and with a minimum of ancillary components. Of course, using these components will not teach you all that much about how to design radio circuits, but it does offer a short path to a working model.

If you have any specific questions, let me know.

73, Bob K6DDX

801. Re: Ham-Homebrew Digest V2000 #28

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3891F86D.7FBF@pop.removethistomailme.net>
Source record: 63710

Frank R. Neal wrote:
>
> Spammer
>
>

Many of us use commercial NNTP servers with built-in spam filters. The only time we ever even *see* spam on a newsgroup is when some #$@#$ on a non-filtered server propagates the spam by replying to it and quoting the whole damned thing.

Do you think spammers actually read newsgroups? Do you think publicly accusing them of being "spammers" will encourage even one spammer to turn aside from the path of spammerhood?

Same goes for the rocket scientists who keep perpetuating the "ANY YOUNG GIRLS..." thread. Knock it off!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

802. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: JWheeler <kd5bcu@nospam.sydcom.net>
Message-ID: <s943o5gdq0s44@corp.supernews.com>
Source record: 63711
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I'm sorry, but what does this moronic spam have to do with cb and relaxing
requirements for licensing? I know that there are a lot of folks who don't
like the idea of the way restructuring has gone, but give me a break.
That's kind of stretching a bit.

> Another proof why we should NEVER abandon CW requirement. . It filters
> things like this. Once you allow CBers on HF this is what's gonna happen.
> Well not exactly the same, but kind of ...)
>
> 73 Mike VK4NM

803. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <86t3m7apn1@newcastle.cs.ubc.ca>
Source record: 63712

blackm00@cam.org (Michael Black) writes:

>Anyway, I've never had problems using masking tape to mask off the unetched
>side of the board.
>Electrical tape worked too.

Another possibility: clear box-sealing tape. It's strong, clear, cheap,
and 2 inches wide (so you need to apply fewer strips).

I've made small circuit boards by covering the whole board with this
tape, then using a sharp knife to cut two parallel tracks and remove
the tape wherever I wanted the copper etched.

Dave

804. Re: Silver-plated Teflon wire.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <86t3piaqn1@newcastle.cs.ubc.ca>
Source record: 63713

"Barry L. Ornitz" <ornitz@NOSPAM.tricon.net> writes:

>. And the Gore processes for producing PTFE insulated wire
>are quite similar to those used by other companies too. PTFE is
>an unusual material that cannot be processed by conventional
>molding or extrusion methods. While some references may list a
>melting point for PTFE, it really has none. The temperature
>listed is that at which all crystallinity in the material
>disappears. Even above this temperature, the melt viscosity is
>too high for practical processing (and the polymer begins
>decomposition at these temperatures too).

So, don't keep us in suspense. How *does* Gore (or Belden, or
whoever) coat wire with it? If everyone uses similar processes,
they can't be secret.

Dave

805. FS: Resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Clif Holland <clif@avvid.com>
Message-ID: <38922557.4B5C@avvid.com>
Source record: 63714
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew

The following is a list of tape and reel resistors I have for sale. The
first number is the value and the second is how full the reel is(est).

Asking $50 OBO plus shipping from 75061

There are 3 boxes, 32, 36, and appx 15 lbs.

--
Clif Holland, KA5IPF
Owner of AVVid, an Authorized Kenwood and Icom Service Center
For more info click on the following
http://www.avvid.com/
or call 1-800-214-5779

806. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2801002003400001@dialup-979.hip.cam.org>
Source record: 63715

In article <86t3m7apn1@newcastle.cs.ubc.ca>, davem@cs.ubc.ca (Dave Martindale) wrote:

> blackm00@cam.org (Michael Black) writes:
>
> >Anyway, I've never had problems using masking tape to mask off the unetched
> >side of the board.
> >Electrical tape worked too.
>
> Another possibility: clear box-sealing tape. It's strong, clear, cheap,
> and 2 inches wide (so you need to apply fewer strips).
>
> I've made small circuit boards by covering the whole board with this
> tape, then using a sharp knife to cut two parallel tracks and remove
> the tape wherever I wanted the copper etched.
>
> Dave

That was in the back of my mind, but I've never tried it mainly because when I started making circuit boards years ago, I hadn't had contact with a wide variety of tapes. Probably any tape works, with the caveat that some probably stick better than others.

Certainly for RF with discrete components, it makes more sense to cover the board completely, and then remove tape where you need it, rather than lay out traces, and then fill in the ground area as much as possible.

I am reminded that in some cases, for maximum ground area but where "dead bug" style doesn't fit, one can use a Dremel tool with a burr or cutting wheel to separate out the islands. With that method, the only bare areas are where you've made the cuts.

Michael VE2BVW

807. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-F70934.22521728012000@news.erols.com>
Source record: 63716
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I'll type slowly.

You asked, "Who is allowing CB'ers on HF?"

I answered, "The FCC."

Please note, the words "giving it away" were never used.

Your comment about no code techs are irrelevent to HF and CB, since they
were not given voice priveleges.

Some would argue amateur radio has already turned into CB, some before
the No Code Tech licenses were issued.

In article <389101ed.1879120@news.thegrid.net>,
cobrano-spam@budweiser.com (kf6foz) wrote:

> Just how is the FCC giving it away? The last time I checked, The
> license structure is still in tact, thus it isn't being given away.
> If ham radio was going to turn into CB, It would have done it years
> ago when the no-code tech license was invented. As for some on ham
> radio that allready treat it like CB, They need to be dealt with so it
> isnt inviting for those. Address the current problem, then deal with
> what is up and coming.
>
> 73, kf6foz
>
> On Thu, 27 Jan 2000 21:34:56 -0500, Steve
> <amradio@thebizlink.com.removethis> wrote:
>
> >Right. Actually the answer to your original question is the FCC.
> >
> >
> >
> >In article <388f79e8.3469233@news.thegrid.net>,
> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >
> >> Of course they have. 11-meters is an HF band.
> >>
> >> On Wed, 26 Jan 2000 14:53:50 -0500, Steve
> >> <amradio@thebizlink.com.removethis> wrote:
> >>
> >> >CBers have been on HF since day one (late 50's0!!
> >> >
> >> >

> >> >In article <388f1b6a.24498158@news.thegrid.net>,
> >> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >> >
> >> >> Since I do have a radio which goes there and listen on 10 meters
> >> >> half
> >> >> the time, I have to say that I have heard maybe 3 or 4 CB'ers in
> >> >> that
> >> >> low segment in the past 3 yrs. However, I have heard more
> >> >> bootleggers
> >> >> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers
> >> >> to
> >> >> use The ham portions of HF legally. They usually dont last too long
> >> >> when they are there and we must remember that other countries sell
> >> >> radios as CB that cover these bands and may well be another country
> >> >> you are hearing. While I do admit that there are CB'ers that go
> >> >> there,
> >> >> I also find that in that segment there SWR is really high and that
> >> >> deters them from coming back. Another reason I think that FCC
> >> >> doesnt
> >> >> do too much about CB radio is the fact that DX kind of helps the cb
> >> >> get away with alot since I know I dont want to travel 3,000 miles
> >> >> to
> >> >> catch an operator in the act, plus the other countries that operate
> >> >> legaly in those bands as CB operators kind of help to camouflage
> >> >> the
> >> >> signals. That is funny about the roger beeps and weird talk.....
> >> >>
> >> >> When I asked the question below, I just thought that there was some
> >> >> news that I didnt hear.
> >> >>
> >> >> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
> >> >> <johnande@nospaminterl.net> wrote:
> >> >>
> >> >> >
> >> >> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
> >> >> >news:388c51b3.2265222@news.thegrid.net...
> >> >> >> Who is allowing CB'ers on HF?
> >> >> >
> >> >> >
> >> >> >Listen on low end of ten meters. Lots of cbers there, with their
> >> >> >roger
> >> >> >beeps
> >> >> >and noises and wierd talk.
> >> >> >
> >> >> >John Anderson K0BKL
> >> >> >
> >> >> >http://www.interl.net/~johnande/
> >> >> >
> >> >> >
> >> >> >
```
```

> >> >> >>
> >> >> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
> >> >> >> <vk4nm@hotmail.com> wrote:
> >> >> >>
> >> >> >> >Another proof why we should NEVER abandon CW requirement. . It
> >> >> >> >filters
> >> >> >> >things like this. Once you allow CBers on HF this is what's
> >> >> >> >gonna
> >> >> >> >happen.
> >> >> >> > Well not exactly the same, but kind of ...)
> >> >> >> >
> >> >> >
> >> >> >
> >> >> >
> >> >>
> >> >> http://www.qsl.net/kf6foz/
> >>
> >> http://www.qsl.net/kf6foz/
>
> The kf6foz BBS
> http://www.qsl.net/kf6foz/

808. 3-500ZG Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-D6E0ED.22542928012000@news.erols.com>
Source record: 63717

I have an Eimac data sheet for the 3-500Z. Do the newer 3-500ZGs differ much compared to the original 3-500Zs, other than the graphite plates?

809. Radios and Computer Question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: KilroogEye <kilroogeyeNOkiSPAM@hotmail.com.invalid>
Message-ID: <17599f0b.cbd73ea1@usw-ex0105-039.remarq.com>
Source record: 63718

Dear Radio People,

My friend and I are thinking about doing a science project
that would require two computers to "talk" to eachother
using CB radios...

We don't want to transmit pictures or anything - - Just
simple text messeges. I need to know if there is a program
out there that turns letters typed on the computer to some
kind of signal that a computer can send and receive using
the CB radio as the carrier.

Please write back to:

AdamRoss@aol.com

Thank you for your time!

Adam Ross & Tim Donovan

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

810. RF assistance sought (HF)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: Des Bromilow <des.bromilow@citec.com.auV2>
Message-ID: <3890C03E.AE8EC969@citec.com.auV2>
Source record: 63791
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

G'Day,
I'm hoping someone can help me with a simple request which I'm asking on behalf of some microprocessor experimenters.

My main questions are geared towards building a low wattage (<500mW) transmitter which uses a removable crystal (27 or 40MHz) for frequency selection. The receiver would need matching capabilites (frequency modification via crystal subtitution) and AGC. I've a grasp on the concepts of FM Tx and Rx using PLL, but no practical experience. I have built my fair share of crystal sets, and so have an understanding of AM detection, but no experience using IF and subsequent mixers.

If someone has a URL for a "dummys guide to basic RF design" or something that would help (circuit diagram for RC Tx/Rx sets, or crystal based Tx/Rx pairs in the HF bands), I would appreciate it.
I'm using 27MHz and 40 MHz since they are the standard frequencies for RC cars in Australia. I plan on using crystals for RC cars (from high Q in Sydney) in my circuits. This way I'll be avoiding my experiments causing any issues with DOTC. The hoped for design will use a "data in" and "data out" pin in the transmitter, receiver respectively. I beleive that RC cars are limited to a bandwidth of 10kHz, so our processor designs would have to take this into account.

I would appreciate any assistance i can obtain. Most of us don't have a lot of the FR test instruments you would have, so designs which do not rely so heavily on these instruments would be appreciated, However if this reasoning is unreasonable, then please let me know. Please send info to des.bromilow@citec.com.au and to the list.

Many many thanks in advance,
Des Bromilow
--
Des Bromilow
Queensland Rocketry Association
Brisbane
Australia
"Inner Child" be darned... I'm having WAY too much fun rediscovering my "Inner Teenager"!!! dyb 11/2/99
Email addresses: des.bromilow@citec.com.auV2 and desbromilow@primus.com.auV2
remove the German anti-spam device before replying.

811. templates/schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: tim583@my-deja.com
Message-ID: <86qojg$4o5$1@nnrp1.deja.com>
Source record: 63792

Hello NG

I'm looking for a HF linear 1-30mhz 2290 driving 4-2879s. I don't have the time to design one. Better yet which addition of the Arrl handbook has a design close to what I'm asking Thanks. Must have templates/schematics.

Thanks

Tim

Sent via Deja.com http://www.deja.com/
Before you buy.

812. Intelligibility - important factor for equipment (at least for mine)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3890e953.2510657@news.online.no>
Source record: 63793
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boathanchors

Improving intelligibility of receivers/reansmitters:

Remember in 1969 LA4O radio club were running a radio shack at an exhibition (LA1X) using a brand new Trio transceiver (not TS-500), and all public seemed to avoid us, but LA2DL installed his Drake TR-4, and suddenly it went rather crowded around the stand

Have been interested in how to implement good agc performance in my equipment, this happened after I got my first Drake 2-B receiver in 1969. I often wondered why Drake receivers have extraordinary good AGC performance while several manufacturers did not care for it until mid 80's.

The following cures have been found:
Trio TS-500, this is the worst agc I have experienced
Cure: Add a 22k resistor in series with large time constant capacitor (0.5uF?)

Yaesu FL-dx-500 (TX)
vast improvement on TX performance (intelligibility) was obtained with similar cure as above, believe it was 22k in series with 0.1uF capacitor in the ALC circuit Local English stations reported "now I can understand your English much better"

Heath-Kit SB-300/SB-301
Some AGC improvement is to use 1N4148 diodes as AGC detector, AGC voltage increased by a factor of two for an S-9 signal with SB-301. SB-300 was replaced by the 2-B, and I did not try AGC-improvement with it.
Also found another problem with SB-301 (SB-300), it is mentioned in Radcom TT(G3VA) in late 70's. RF amp (6BZ6) is unlinear, causes intermodulation. Grid 1 draws current, because it is too little bias voltage. Increase the screen voltage to 120V and cathode resistor for the same anode current as before.

Collins 51-S. (for SSB-only)
insert a 22k resistor in series with 0.47uF across the AGC-line. This is good for SSB and CW only, to include AM makes it more complex, but with the simple modification AM receiption with QSB it is worsened.

YAESU: FT-901/902 and FT-7 seem to work satisfactorily, while FT-726 and FT-736 seem to need some improvement. Worst problem with FT-726 seems to come from product detector, wrong supply resistor.

TRIO/KENWOOD TR-7010. Did some AGC improvement (in principal similar to Drake TR-4), but the main problem is that product detector diode

ring is biassed, remove this, and remove the two 30pF balancing capacitors to increase BFO drive level.

YAESU FT-101/101B, FT-221/FT225: AGC improvement failed and the reason seems to be rather strong carrier leakage which follows through the IF, seems almost impossible to cure. I did some extensive tests with FT-221. Carrier connection could be removed from the product detector and still SSB signal could be read as before. One suggestion for AGC is plessey SL-621/1621 audio derived AGC, but still IF signal is distorted, see HamRadio (abt R-4C)

R-4C: It is a problem with something which looks like carrier leakage, seems to be variable, may derive from xtal oscillator. Difficult when a separate product detector with 10kHz off-set BFO is used for cw meteorscatter receiption. This is mentioned in HR, but I don't agree, still it is very bad IF distortion without any connections to the product detector - whatever type is used, original or one using MC1496P.

73 Jan-Martin LA8AK

813. Re: 4-1000 amplifier plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-28 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <20000127202119.09588.00000380@ng-fx1.aol.com>
Source record: 63794

>does anyone have a construction article for a 80-10meter amp any help would
>be appreciated thanks and 73 please e-mail wr4f1@juno.com

If you have any way of solving the 10 meter matching problem with the 4-1000,
I'd be interested to know your solution.

John...
WB4LNM

John H. Klingelhoeffer
WB4LNMxx@aol.com (remove xx for real address)

814. Re: Trimming a crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <3893786B.992810F@mlecmn.net>
Source record: 63645

Jack Edmunds wrote:
>
> I am building a kit radio and has a 4.0MHz crystal that needs to be checked
> to see that it is running at 4 MHz. The suggestion is to set a hf rig at
> 4.00MHz and then adjust the trimmer until "the oscillator signal is at a
> perfect null or zero-beat".
>
> I have adjusted the trimmer until the signal has become quiet. Is that what
> they mean by the above?
>

The zero beat technique may not work too well with modern HF rigs. In CW mode, when the receiver display indicates 4.000 MHz, a 4.000 MHz incoming signal will produce a tone in the speaker at whatever setting you have chosen for the BFO pitch; *not* a zero beat. If the receiver doesn't have a BFO pitch control, the default is probably in the range of 700 to 800 Hz. If you tune the crystal to zero beat, its frequency will be in error by the value of the BFO pitch setting. Zero beating *will* yield the correct frequency if the receiver is set for SSB reception. However, in a receiver with good SSB filters, the signal may disappear before you get to zero beat, and you won't hear the pitch rise again as you tune to the other side of zero beat -- the signal is *gone*. So you can't really tell where to stop tuning. One way to check is to listen in both USB and LSB modes at 4.000 MHz; if you've tuned too far you will hear the signal on the other sideband.

The technique I prefer is to tune in a known signal (like WWV at 5.000 MHz) in CW mode, and set an audio signal generator to the same pitch as the tone coming out of the receiver. Then go back to 4.000 MHz without changing the BFO pitch setting, and adjust the crystal until the receiver puts out the same audio pitch. There are several sound-card based freeware audio spectrogram programs that will let you do essentially the same thing, without the need for the audio signal generator.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

815. FA: HP 8552B Spectrum Analyzer Plug-In IF Section

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <g5Lk4.227$mG1.8130448@server2.news.adelphia.net>
Source record: 63646
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew

This is the IF plug-in for the 140-T and 141-T series spectrum analyzer mainframes. It's in good cosmetic condition, the connectors look clean, and all knobs and switches are smooth... but I don't have the mainframe, so I can't test it. It was last calibrated 8-30-94. Please check my other auctions for the matching HP 8553B RF plug-in.

NO RESERVE!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=247891886

816. Re: 900 Megahertz Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <38937F87.39B8@mad.scientist.com>
Source record: 63647

```
Dana H. Myers K6JQ wrote:
>
> WebMonkey wrote:
>
> > consultant@representative.com wrote:
> > >
> > > Anyone ever successfully add an outside antenna to their portable 900 MHz phone?
> > >
> > > Thanks.
> > >
> > depends on the phone
> > i've got a motorola flip phone and an external solution was offered
> > for my model. works fine w/noticeable improvement on the fringe of
> > portable coverage.
>
> I'm tempted to add an antenna to my ATT 9520 (aka HS-8500). The
> base unit actually has a short of coax from the PCB to the (apparently
> resonant) built-in antenna. At a power level of approximately +24dBm,
> I suspect I could even add a decent omni with a short run of coax and
> remain inside scope of Part 15 (though I want to re-read it sometime
> and verify this).
>
> As it stands, that phone almost scares me how much power it runs. Certainly,
> it has the best range of any cordless phone I've owned (and a fairly short
> battery life!).
>
> Dana K6JQ
>
i'm sorry, i had just gotten done in the cellular newsgroup when
i responded to your post.

as for pots phones, i have a sprint 900mHz digital spread spectrum
a uniden model. outside antennae work well for me.
i have a few acres out here in the sticks and a big improvement was
gained.
--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman
```

817. HP 8553B Spectrum Analyzer Plug-In RF Section

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <G6Lk4.228$mG1.8134209@server2.news.adelphia.net>
Source record: 63648
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,sci.electronics.equipment

This is the RF plug-in for the 140-T and 141-T series spectrum analyzer mainframes. It tunes from 1 kHz to 110 mHz. It's in good cosmetic condition, the connectors look clean, and all knobs and switches are smooth... but I don't have the mainframe, so I can't test it. It was last calibrated 5-18-95. Please check my other auctions for the matching HP 8552B IF plug-in.

NO RESERVE!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=247961698

818. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: ditdah <ditdah@fastlane.net>
Message-ID: <26EE49F5EB0C851B.841BDFAA3270AA83.2AC753EB3E1A3161@lp.airnews.net>
Source record: 63649

BULL SHIT
Dave Martindale <davem@cs.ubc.ca> wrote in message
news:86veutjft1@newcastle.cs.ubc.ca...
> "ditdah" <ditdah@fastlane.net> writes:
> >Partner, silicone grease is HIGHLY conductive. I've been using it on out
> >door rf connectors for over 20 years with excellent results..KV5I
>
> Silicone grease is an excellent *insulator*. When you use it on things
> like RF connectors, the metal contact surfaces push the grease aside
> and make metal-to-metal contact. The grease is useful because it fills
> what would otherwise be air space, and keeps water out of the connector.
>
> Dave

819. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <=LCTON9zQRnErwmXstpz12xuS6MJ@4ax.com>
Source record: 63650

"ditdah" <ditdah@fastlane.net> wrote:

>Partner, silicone grease is HIGHLY conductive. I've been using it on out
>door rf connectors for over 20 years with excellent results..KV5I

If it were a good conductor don't you think it would short out your
connector?

I assume that you're packing the inside and mating faces of the
connectors. This is actually a good idea because it excludes air and
moisture and reduces corrosion. It doesn't prevent the metal parts
from making contact with each other where they are expected to do so,
but it is not a conductor.

Silicones are very good insulators.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA
---

820. Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Tim Seguin <tatraweb@core.com>
Message-ID: <AVOk4.845$dq3.49410@news.corecomm.net>
Source record: 63651

I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a good deal or a waste of money?

821. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3893BF98.51BB@pop.removethistomailme.net>
Source record: 63652

ditdah wrote:
>
> BULL SHIT

Looks like Dick Bash has wrought his work well.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

822. FS: VZ60-20 JRC Vacuum Variable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Bob <bmiller@calweb.com>
Message-ID: <3893e8c3$1_1@news9.calweb.com>
Source record: 63653
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

For Sale: Japan Radio Corporation 60-5 picofarad vacuum variable.
Estimate 5-10 kv, Ceramic Construction with shaft head (1/4 inch shaft)
metal portions (excluding shaft) are heavy silver plated (tarnished). Unit
is about 10 percent larger than a Jennins UCS-500 and the same form factor.
Unit measures at specified values min and max. Full JRC nomenclature is:
VZ-60-20 HTS C 1054B

A nice unit for a 6 meter KW+ amplifier.

$100 post paid, insured, and double boxed conus.

Tnx for the read es 73

Bob, KE6F

823. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <3892240D.9BAF812A@webaxs.net>
Source record: 63719

If you want to do pcb a few foot square, then just spray with normal pcb
lacquer or plasticoat. It can be removed with acetone if neccessary.

Dave Martindale wrote:
>
> blackm00@cam.org (Michael Black) writes:
>
> >Anyway, I've never had problems using masking tape to mask off the unetched
> >side of the board.
> >Electrical tape worked too.
>
> Another possibility: clear box-sealing tape. It's strong, clear, cheap,
> and 2 inches wide (so you need to apply fewer strips).
>
> I've made small circuit boards by covering the whole board with this
> tape, then using a sharp knife to cut two parallel tracks and remove
> the tape wherever I wanted the copper etched.
>
> Dave

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

824. Warp-17 Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: bnewberg@winstead.com
Message-ID: <kEqk4.72439$905.1491565@news5.giganews.com>
Source record: 63720

Looking for a Newfound Electronics Warp-17 programmer.

Please reply by e-mail to bnewberg@winstead.com.

Thanks,

Barry Newberger

825. Hallicrafters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Dennis&Robins News <dbrown01@flash.net>
Message-ID: <extk4.12189$rl6.295809@news.flash.net>
Source record: 63721

Hallicrafters Nc125 for sale with manual and matching speaker.
dbrown0197@yahoo.com

826. want to modify amp to work on 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: turboblown@aol.com
Message-ID: <20000128232637.22498.00000155@ng-cq1.aol.com>
Source record: 63722

I am interested in modifying an old 10/11 meter amp or even an SB200/220 to operate on the 6m band. Does anyone know how to do it or has anyone done it before?
Thanks

827. seeking ac fan

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: louis <lou1@primenet.com>
Message-ID: <86u0dh$ni0$8@nnrp02.primenet.com>
Source record: 63723

hi

seeking an a.c. cooling fan about 3 x 3 inches

pls email me

thanks

louis

--
==========
email: lou1@primenet.com

828. Re: want to modify amp to work on 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: j999w@aol.com
Message-ID: <20000129020348.26296.00000217@ng-cn1.aol.com>
Source record: 63724

If you do a web search, you should be able to find the needed info.

I have copies of the orig. QST articles from the 60's if you would like.

jw
WB9UAI

829. Re: Radios and Computer Question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: JDM <jdm@iland.net>
Message-ID: <38928D24.A82AA1A8@iland.net>
Source record: 63725

It's not legal on CB frequencies but you probably don't care, do you?

830. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: ditdah <ditdah@fastlane.net>
Message-ID: <DB2ADEF332FCB079.B1170B17569CE6F3.D4584D9C3DF1E94D@lp.airnews.net>
Source record: 63726

Partner, silicone grease is HIGHLY conductive. I've been using it on out
door rf connectors for over 20 years with excellent results..KV5I
Reg Edwards <G4fgq.Regp@btinternet.com> wrote in message
news:86mkb2bfg1@neptunium.btinternet.com...
> John, get a can of spray-on electrical switch cleaner from an
> engineers supply store and give it one or two quick bursts. It nearly
> all evaporates within a few seconds and leaves behind a slight trace
> of lubricant.
>
> The last thing you should do is daub silicone grease or odinary
> lubricating oil over electrical contacts - they will no longer be in
> contact. You might just as well use butter with bread crumbs in it.
> --
> ================================
> Greetings from Reg, G4FGQ
> For free technical radio software go to:-
> http://www.btinternet.com/~g4fgq.regp
> ================================
> JPhelan501 <jphelan501@aol.com> wrote in message
> news:20000125174944.03993.00000287@ng-ff1.aol.com...
> > I have a new-old-stock roller inductor made by EF Johnson that I
> want to use in
> > an antenna tuner project. It is ceramic with silver plated wire, and
> with a
> > silver plated rolling contact. It squeaks and squeals terribly when
> rotated.
> > Does anyone know if this thing can be lubricated, and with what
> lubricant?
> >
> > Thanks in advance.
> > 73 de John N3DRA
> >
>

831. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <3892a840.10899672@news.thegrid.net>
Source record: 63727
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Maybe I'll type a little slower. The "giving it away" was stated,
Since the complete thread is not here, you cant see that.

About the No-Code Techs and CB, Your Right and Wrong. Again since the
complete thread was left out, The whole reply was towards HF/VHF/UHF
thus meaning "Ham Radio" like stated, Techs do have voice priviliges
on VHF/UHF the last time I checked.

I dont argue with the fact that others would say Ham Radio has
somewhat of a CB Attitude on certain frequencies, But I will say not
all Ham is that way.

On Fri, 28 Jan 2000 22:52:17 -0500, Steve
<amradio@thebizlink.com.removethis> wrote:

>I'll type slowly.
>
>You asked, "Who is allowing CB'ers on HF?"
>
>I answered, "The FCC."
>
>Please note, the words "giving it away" were never used.
>
>
>Your comment about no code techs are irrelevent to HF and CB, since they
>were not given voice priveleges.
>
>Some would argue amateur radio has already turned into CB, some before
>the No Code Tech licenses were issued.
>
>
>
>
>In article <389101ed.1879120@news.thegrid.net>,
>cobrano-spam@budweiser.com (kf6foz) wrote:
>
>> Just how is the FCC giving it away? The last time I checked, The
>> license structure is still in tact, thus it isn't being given away.
>> If ham radio was going to turn into CB, It would have done it years
>> ago when the no-code tech license was invented. As for some on ham
>> radio that allready treat it like CB, They need to be dealt with so it
>> isnt inviting for those. Address the current problem, then deal with
>> what is up and coming.
>>

>> 73, kf6foz
>>
>> On Thu, 27 Jan 2000 21:34:56 -0500, Steve
>> <amradio@thebizlink.com.removethis> wrote:
>>
>> >Right. Actually the answer to your original question is the FCC.
>> >
>> >
>> >
>> >In article <388f79e8.3469233@news.thegrid.net>,
>> >cobrano-spam@budweiser.com (kf6foz) wrote:
>> >
>> >> Of course they have. 11-meters is an HF band.
>> >>
>> >> On Wed, 26 Jan 2000 14:53:50 -0500, Steve
>> >> <amradio@thebizlink.com.removethis> wrote:
>> >>
>> >> >CBers have been on HF since day one (late 50's0!!
>> >> >
>> >> >
>> >> >In article <388f1b6a.24498158@news.thegrid.net>,
>> >> >cobrano-spam@budweiser.com (kf6foz) wrote:
>> >> >
>> >> >> Since I do have a radio which goes there and listen on 10 meters
>> >> >> half
>> >> >> the time, I have to say that I have heard maybe 3 or 4 CB'ers in
>> >> >> that
>> >> >> low segment in the past 3 yrs. However, I have heard more
>> >> >> bootleggers
>> >> >> on VHF/UHF than on the HF bands. There isnt anybody allowing CB'ers
>> >> >> to
>> >> >> use The ham portions of HF legally. They usually dont last too long
>> >> >> when they are there and we must remember that other countries sell
>> >> >> radios as CB that cover these bands and may well be another country
>> >> >> you are hearing. While I do admit that there are CB'ers that go
>> >> >> there,
>> >> >> I also find that in that segment there SWR is really high and that
>> >> >> deters them from coming back. Another reason I think that FCC
>> >> >> doesnt
>> >> >> do too much about CB radio is the fact that DX kind of helps the cb
>> >> >> get away with alot since I know I dont want to travel 3,000 miles
>> >> >> to
>> >> >> catch an operator in the act, plus the other countries that operate
>> >> >> legaly in those bands as CB operators kind of help to camouflage
>> >> >> the
>> >> >> signals. That is funny about the roger beeps and weird talk.....
>> >> >>
>> >> >> When I asked the question below, I just thought that there was some
>> >> >> news that I didnt hear.
>> >> >>

>> >> >> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
>> >> >> <johnande@nospaminterl.net> wrote:
>> >> >>
>> >> >> >
>> >> >> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
>> >> >> >news:388c51b3.2265222@news.thegrid.net...
>> >> >> >> Who is allowing CB'ers on HF?
>> >> >> >
>> >> >> >
>> >> >> >Listen on low end of ten meters. Lots of cbers there, with their
>> >> >> >roger
>> >> >> >beeps
>> >> >> >and noises and wierd talk.
>> >> >> >
>> >> >> >John Anderson K0BKL
>> >> >> >
>> >> >> >http://www.interl.net/~johnande/
>> >> >> >
>> >> >> >
>> >> >> >
>> >> >> >>
>> >> >> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
>> >> >> >> <vk4nm@hotmail.com> wrote:
>> >> >> >>
>> >> >> >> >Another proof why we should NEVER abandon CW requirement. . It
>> >> >> >> >filters
>> >> >> >> >things like this. Once you allow CBers on HF this is what's
>> >> >> >> >gonna
>> >> >> >> >happen.
>> >> >> >> > Well not exactly the same, but kind of ...)
>> >> >> >> >
>> >> >> >
>> >> >> >
>> >> >> >
>> >> >>
>> >> >> http://www.qsl.net/kf6foz/
>> >> >>
>> >> >> http://www.qsl.net/kf6foz/
>> >>
>> >> The kf6foz BBS
>> >> http://www.qsl.net/kf6foz/

The kf6foz BBS
http://www.qsl.net/kf6foz/

832. Re: Etching Large Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Valter Hilden <vhilden@infolink.com.br>
Message-ID: <3892CA2E.6753223D@infolink.com.br>
Source record: 63728

Dave Martindale wrote:
>
> blackm00@cam.org (Michael Black) writes:
>
> >Anyway, I've never had problems using masking tape to mask off the unetched
> >side of the board.
> >Electrical tape worked too.
>
> Another possibility: clear box-sealing tape. It's strong, clear, cheap,
> and 2 inches wide (so you need to apply fewer strips).
>
> I've made small circuit boards by covering the whole board with this
> tape, then using a sharp knife to cut two parallel tracks and remove
> the tape wherever I wanted the copper etched.
>
> Dave

There's something that's even better: you can get clear, self adhesive
plastic in sheets, I think about 1m x 50cm. Here in Brazil it's sold
under the name Con-Tact.

833. Re: seeking ac fan

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Ron Cook <roncook@att.net>
Message-ID: <bhi59skjpd54hdk5k9tib40if4gkk9od0k@4ax.com>
Source record: 63729

(emailed / posted)

If you are in the US, try a local RadioShack store. I seem to recall
that they carry such a unit.

You might also try their Website at < www.radioshack.com >

Their catalog number is 273-242 and it should be available in most of
the stores.

On 29 Jan 2000 06:13:05 GMT, louis <lou1@primenet.com> wrote:

>hi
>
>seeking an a.c. cooling fan about 3 x 3 inches
>
>pls email me
>
>thanks
>
>louis

Ron n1zhi
roncook@att.net
cook@amsa.com (office)
ICQ: 26516311

834. Re: Hallicrafters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <86umt0$tl5$1@nnrp1.deja.com>
Source record: 63730

In article <extk4.12189$rI6.295809@news.flash.net>,
"Dennis&Robins News" <dbrown01@flash.net> wrote:
> Hallicrafters Nc125 for sale with manual and matching speaker.
> dbrown0197@yahoo.com
>
>

I know NC radios from National, not from Hallicrafters...It is curious.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

835. Re: Radios and Computer Question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3892EF85.6F8FADA6@dialpoint.net>
Source record: 63731

While probably not legal on the CB guess that you could put them into a dummy load and be ok if you just want to transmitt across the room for a science project.

Look here for some sound blaster programs.

http://www.muenster.de/%7Ewelp/sb.htm

You might want to check out BTL .

While it says fo rmsdos, I have ran it under win98.

KilroogEye wrote:
>
> Dear Radio People,
>
> My friend and I are thinking about doing a science project
> that would require two computers to "talk" to eachother
> using CB radios...
>
> We don't want to transmit pictures or anything - - Just
> simple text messeges. I need to know if there is a program
> out there that turns letters typed on the computer to some
> kind of signal that a computer can send and receive using
> the CB radio as the carrier.
>
> Please write back to:
>
> AdamRoss@aol.com
>
> Thank you for your time!
>
> Adam Ross & Tim Donovan
>
> * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> The fastest and easiest way to search and participate in Usenet - Free!

836. Re: Manuals and Tubes for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <86v3sqhs1@ruby.mint.net>
Source record: 63732
Cross-posted to: rec.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Gary Brown <gbrown@mint.net> wrote in message
news:86v3k7vvr1@ruby.mint.net...
> I have photocopies of alot of manuals for Hallicrafters, Heathkit,
> Hammarlund and others.
> Also have thousands of tubes for sale. E-Mail me with your wants to:
> gbrown@mint.net
> Thank you
> Gary
>
>

837. Re: ANY YOUNG GIRLS OUT THERE WANT TO BE A MODEL? 27409

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-90D298.10290529012000@news.erols.com>
Source record: 63733
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <3892a840.10899672@news.thegrid.net>,
cobrano-spam@budweiser.com (kf6foz) wrote:

> Maybe I'll type a little slower. The "giving it away" was stated,

Not by me.

> Since the complete thread is not here, you cant see that.
>
> About the No-Code Techs and CB, Your Right and Wrong. Again since the
> complete thread was left out, The whole reply was towards HF/VHF/UHF
> thus meaning "Ham Radio" like stated, Techs do have voice priviliges
> on VHF/UHF the last time I checked.

But not on HF which is what I said.

>
> I dont argue with the fact that others would say Ham Radio has
> somewhat of a CB Attitude on certain frequencies, But I will say not
> all Ham is that way.

Agreed.

>
> On Fri, 28 Jan 2000 22:52:17 -0500, Steve
> <amradio@thebizlink.com.removethis> wrote:
>
> >I'll type slowly.
> >
> >You asked, "Who is allowing CB'ers on HF?"
> >
> >I answered, "The FCC."
> >
> >Please note, the words "giving it away" were never used.
> >
> >
> >Your comment about no code techs are irrelevent to HF and CB, since they
> >were not given voice priveleges.
> >
> >Some would argue amateur radio has already turned into CB, some before
> >the No Code Tech licenses were issued.
> >
> >
> >
> >

> >In article <389101ed.1879120@news.thegrid.net>,
> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >
> >> Just how is the FCC giving it away? The last time I checked, The
> >> license structure is still in tact, thus it isn't being given away.
> >> If ham radio was going to turn into CB, It would have done it years
> >> ago when the no-code tech license was invented. As for some on ham
> >> radio that allready treat it like CB, They need to be dealt with so it
> >> isnt inviting for those. Address the current problem, then deal with
> >> what is up and coming.
> >>
> >> 73, kf6foz
> >>
> >> On Thu, 27 Jan 2000 21:34:56 -0500, Steve
> >> <amradio@thebizlink.com.removethis> wrote:
> >>
> >> >Right. Actually the answer to your original question is the FCC.
> >> >
> >> >
> >> >
> >> >In article <388f79e8.3469233@news.thegrid.net>,
> >> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >> >
> >> >> Of course they have. 11-meters is an HF band.
> >> >>
> >> >> On Wed, 26 Jan 2000 14:53:50 -0500, Steve
> >> >> <amradio@thebizlink.com.removethis> wrote:
> >> >>
> >> >> >CBers have been on HF since day one (late 50's0!!
> >> >> >
> >> >> >
> >> >> >In article <388f1b6a.24498158@news.thegrid.net>,
> >> >> >cobrano-spam@budweiser.com (kf6foz) wrote:
> >> >> >
> >> >> >> Since I do have a radio which goes there and listen on 10 meters
> >> >> >> half
> >> >> >> the time, I have to say that I have heard maybe 3 or 4 CB'ers in
> >> >> >> that
> >> >> >> low segment in the past 3 yrs. However, I have heard more
> >> >> >> bootleggers
> >> >> >> on VHF/UHF than on the HF bands. There isnt anybody allowing
> >> >> >> CB'ers
> >> >> >> to
> >> >> >> use The ham portions of HF legally. They usually dont last too
> >> >> >> long
> >> >> >> when they are there and we must remember that other countries
> >> >> >> sell
> >> >> >> radios as CB that cover these bands and may well be another
> >> >> >> country
> >> >> >> you are hearing. While I do admit that there are CB'ers that go

> >> >> >> there,
> >> >> >> I also find that in that segment there SWR is really high and
> >> >> >> that
> >> >> >> deters them from coming back. Another reason I think that FCC
> >> >> >> doesnt
> >> >> >> do too much about CB radio is the fact that DX kind of helps the
> >> >> >> cb
> >> >> >> get away with alot since I know I dont want to travel 3,000
> >> >> >> miles
> >> >> >> to
> >> >> >> catch an operator in the act, plus the other countries that
> >> >> >> operate
> >> >> >> legaly in those bands as CB operators kind of help to camouflage
> >> >> >> the
> >> >> >> signals. That is funny about the roger beeps and weird talk.....
> >> >> >>
> >> >> >> When I asked the question below, I just thought that there was
> >> >> >> some
> >> >> >> news that I didnt hear.
> >> >> >>
> >> >> >> On Wed, 26 Jan 2000 08:38:02 -0600, "John Anderson"
> >> >> >> <johnande@nospaminterl.net> wrote:
> >> >> >>
> >> >> >> >
> >> >> >> >"kf6foz" <cobrano-spam@budweiser.com> wrote in message
> >> >> >> >news:388c51b3.2265222@news.thegrid.net...
> >> >> >> >> Who is allowing CB'ers on HF?
> >> >> >> >
> >> >> >> >
> >> >> >> >Listen on low end of ten meters. Lots of cbers there, with
> >> >> >> >their
> >> >> >> >roger
> >> >> >> >beeps
> >> >> >> >and noises and wierd talk.
> >> >> >> >
> >> >> >> >John Anderson K0BKL
> >> >> >> >
> >> >> >> >http://www.interl.net/~johnande/
> >> >> >> >
> >> >> >> >
> >> >> >> >
> >> >> >> >>
> >> >> >> >> On Mon, 24 Jan 2000 22:23:47 +1000, "Mike S. [VK4NM]"
> >> >> >> >> <vk4nm@hotmail.com> wrote:
> >> >> >> >>
> >> >> >> >> >Another proof why we should NEVER abandon CW requirement. .
> >> >> >> >> >It
> >> >> >> >> >filters
> >> >> >> >> >things like this. Once you allow CBers on HF this is what's
> >> >> >> >> >gonna

> >> >> >> >> >happen.
> >> >> >> >> > Well not exactly the same, but kind of ...)
> >> >> >> >> >
> >> >> >> >
> >> >> >> >
> >> >> >> >
> >> >> >>
> >> >> >> http://www.qsl.net/kf6foz/
> >> >>
> >> >> http://www.qsl.net/kf6foz/
> >>
> >> The kf6foz BBS
> >> http://www.qsl.net/kf6foz/
>
> The kf6foz BBS
> http://www.qsl.net/kf6foz/

838. Trimming a crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Jack Edmunds <JEdmunds@prodigy.net>
Message-ID: <86v1ug$5rug$1@newssvr03-int.news.prodigy.com>
Source record: 63734

I am building a kit radio and has a 4.0MHz crystal that needs to be checked to see that it is running at 4 MHz. The suggestion is to set a hf rig at 4.00MHz and then adjust the trimmer until "the oscillator signal is at a perfect null or zero-beat".

I have adjusted the trimmer until the signal has become quiet. Is that what they mean by the above?

Thanks, Jack

839. Post Free

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Paul Cimatti <merrybrewer@bizonline.co.uk.NOSPAM>
Message-ID: <389313ae@195.34.192.13>
Source record: 63735

Check out www.themerrybrewer.co.uk
for post free home brew supplies.

840. Re: Trimming a crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <UPEk4.75371$905.1532534@news5.giganews.com>
Source record: 63736

You adjust so that the beat note gets lower and lower in pitch until it starts to go back up; then adjust to the lowest pitch you can get, which could be called 'quiet.'

73, Bob K6DDX

841. Re: want to modify amp to work on 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: THE MICHAEL <nowhere@kenowhere.com>
Message-ID: <s967fm1o1cf39@corp.supernews.com>
Source record: 63737

There is an amp sold to the CB crowd call a 667. It will work on 6 with slightly reduced output as is. With some tweaking the full 600 wpep could be gotten but it doesn't seem worth the effort for about $250 new.

Mike N9XYP

Turboblown <turboblown@aol.com> wrote in message news:20000128232637.22498.00000155@ng-cq1.aol.com...
> I am interested in modifying an old 10/11 meter amp or even an SB200/220 to
> operate on the 6m band. Does anyone know how to do it or has anyone done it
> before?
> Thanks

842. Re: seeking ac fan

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: THE MICHAEL <nowhere@kenowhere.com>
Message-ID: <s967iaef1cf23@corp.supernews.com>
Source record: 63738

Try a defunct XT class computer in the power supply.

Mike N9XYP

louis <lou1@primenet.com> wrote in message
news:86u0dh$ni0$8@nnrp02.primenet.com...
> hi
>
> seeking an a.c. cooling fan about 3 x 3 inches
>
> pls email me
>
> thanks
>
> louis
>
>
>
> --
> ===
> email: lou1@primenet.com
>

843. FA-Vibroflex

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: rkushnir@aol.com
Message-ID: <20000129135242.22228.00000282@ng-ba1.aol.com>
Source record: 63739

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=247440250

844. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <86veutjft1@newcastle.cs.ubc.ca>
Source record: 63740

"ditdah" <ditdah@fastlane.net> writes:
>Partner, silicone grease is HIGHLY conductive. I've been using it on out
>door rf connectors for over 20 years with excellent results..KV5I

Silicone grease is an excellent *insulator*. When you use it on things
like RF connectors, the metal contact surfaces push the grease aside
and make metal-to-metal contact. The grease is useful because it fills
what would otherwise be air space, and keeps water out of the connector.

Dave

845. Re: seeking ac fan

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: GOODNESS--ME@webtv.net
Message-ID: <5714-3893418F-40@storefull-148.iap.bryant.webtv.net>
Source record: 63741

HAVE THE FAN YOU ARE LOOKING FOR

846. circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Wilkes <rwilkes@gte.net>
Message-ID: <bGHk4.350$aZ4.16697@dfiatx1-snr1.gtei.net>
Source record: 63742

In need of circuit board layout software that can perform auto route.

This is for personal amateur use. Nothing overly complicated!

Rich

847. Re: 3-500ZG Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <86vjcg$p2u@nnrp4.farm.idt.net>
Source record: 63743

"Steve" <amradio@thebizlink.com.removethis> wrote in message
news:amradio-D6E0ED.22542928012000@news.erols.com...
> I have an Eimac data sheet for the 3-500Z. Do the newer 3-500ZGs differ
> much compared to the original 3-500Zs, other than the graphite plates?

Steve,

I copied the information below from the RF Parts web site
(http://www.rfparts.com/).

COMPARISON OF 3-400Z and 3-500Z TUBES

EIMAC 3-400Z The Original grounded grid triode introduced in the early
1960s. Now obsolete part number. Power dissipation: 400w.

EIMAC 3-500Z Later version of 3-400Z having larger fins for the increaesd
power dissipation of 500w. Slightly larger body requires minor changes to
fit where 3-400s were used. Requires heat dissipating connector.

3-500ZG Graphite anode version of 3-500Z. Anode dissipation approximately
600w (additional air flow may be required). Graphite anode provides a more
rugged tube. Produced by Eimac, Amperex (3-500Z/8802), RF PARTS, Taylor,
Triton, etc.

3-500C Generic Chinese Graphite tube.

3-600Z Proposed Russia tube. Only prototypes were produced. Call for
information.

COMPARISON OF 3-500Z MANUFACTURERS

EIMAC Eimac was the original designer of 3-500Z line, and is generally
considered the "standard" for comparison. Eimac no longer produces 3-500Z or
other glass tubes.

AMPEREX An excellent graphite anode tube made of quality equal to Eimac
3-500ZG. Late production made in France and marked 3-500Z/8802. These
Amperex tubes require about 10-20% more RF drive than Eimac or RF Parts
tubes for the same power output. 90 day Limited Warranty from RF Parts.

RF PARTS "RFP" line is a quality graphite anode tube, and a copy of the
Eimac 3-500ZG. Probably represents the best value for the price. All tubes
receive 100% RF Parts' testing. 2 year Limited Warranty. Made in China.

TAYLOR RF Parts' 3-500ZG. A good tube at a very competitive price. 100% RF
Parts' testing. 1 year Limited Warranty. Made in China.

PENTA, JOLIDA, STAR, PRIDE, etc. Chinese import tube, quality and warranty
(if any) varies with brand and dealer.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

848. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-29 00:00:00 UTC
From: Bill <blazureNOblSPAM@wstm.com.invalid>
Message-ID: <1e9b4e00.640dbb3e@usw-ex0107-042.remarq.com>
Source record: 63744

Go to httP://www.labcenter.co.uk
Look for ARES Lite. The shareware version is limited to 100 pins,
but an unlimited number of pins can be purchased for $35.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

849. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: res00spaml36@gte.net
Message-ID: <MOLk4.714$aZ4.26440@dfiatx1-snr1.gtei.net>
Source record: 63654

In article <blackm00-1101001304350001@usrh-5-164.hip.cam.org>, blackm00@cam.org says...
>
>In article <20000110233045.05798.00001429@ng-cm1.aol.com>,
>crabtreejr@aol.com (John Crabtree) wrote:
>
>> Hello All
>>
>> I had a letter today from the ARRL saying that they had purchased
>> Communications Quarterly magazine from CQ publications, and would be
>> combining it immediately with QEX.
>>
>> Farewell to an excellent magazine. It is a sign of the times.
>>
>> 73
>>
>> John. KC0GGH
>
>Obviously, CQ publications must be having problems, since they've also
>eliminated their VHF magazine intended for communicators. Or perhaps
>the death of the publisher last year is creating change, just as when
>Jim Fisk died, and Ham Radio magazine changed.
>
>I've seen QEX, and what's in it is okay, but it is rather small for
>the money. There was a time when that sort of thing would fit right
>into QST, without additional cost. I haven't seen QEX in years, because
>the place selling it locally closed. I just can't justify the outlay
>for QEX, not only is there the subscription price, but if you aren't
>an ARRL member, then there's an extra fee, and if you don't live in
>the US, there's an extra fee, and then of course there's the exchange
>rate that brings it higher.
>
>I wonder if this means QEX will change to be more like CommQuart, or
>if the latter just really fades away?
>
(snip)
>
> Michael VE2BVW

Interesting comment on "size for the money". When I got the letter, I did some math:

According to the ARRL website, a 1 year sub to QEX for ARRL members is $22, and each issue is 64 pages long. At 6 issues/year, that's $22 for 384 pages of QEX or about 5.7 cents per page.

The last four issues of Comm Quarterly I received ran a total of 440 pages, and I renewed at a cost of $33. That's roughly 7.5 cents per page.

Assuming that a) QEX doesn't grow in size, and b) editorial content value is the same, then it would appear that current Comm Quarterly subscribers deserve a better deal than the (essentially) "one year of Comm Quarterly = one year of QEX" subscription conversion outlined in the letter.

Comments/criticism welcome, especially since I am still considering writing the ARRL circulation dept about this deal. Flames to /dev/null.

73, Jeff
--
Jeff Miller, NH6ZW/N4
"No good deed ever goes unpunished" -- unknown

850. PCB footprint for AD9854 for Autotrax?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38938b08.1061375@news.m.iinet.net.au>
Source record: 63655

Gday all
Anyone know where I can find a readydone PCB pattern for the AD9854
from Analog Devices (or maybe even a board pattern?)
I am intending to use the device in a I/Q direct conversion receiver
board.
Thanks

Richard

851. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <3893d7e0.38029110@news.mcn.org>
Source record: 63656

On Wed, 26 Jan 2000 19:45:25 -0500, "Al, N2NKB"
<n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:

>
>Dan Richardson wrote in message <388f219d.2597708@news.mcn.org>...
>>I use a product called "Tunerlub" made by GC Electronics cat# 26-01.
>>I purchased it at an electronic parts supply store. It is used to lube
>>TV tuners, switch contacts, relays and the like.
>>
>>Note is used very sparingly and a small tube will be a life time
>>supply.
>>
>>73
>>Danny, K6MHE
>>
>
>How many rotary or turret tuners will we clean in our lifetimes?
>I don't miss cleaning them.
>Al
>
Al,

The product I recommended is a lubricant not a cleaner.

Danny

852. Re: MFJ-8100 World Band Rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3893F574.F6491226@visi.com>
Source record: 63657

Anthony Bailey wrote:

> Hello All, I've been looking at the MFJ-8100K World Band Rcvr kit for
> $69.95 from MFJ Enterprises in MS. Has anyone built this kit and or
> using it.
> Any opinions on it, Thanks, Tony

Hi Tony,
I got one of these about 2 years ago, and put it together. Worked
right off. Pretty good little radio. As a regen, it requires some
finese to operate, and the dial calibration leaves a bit to be desired,
but all in all a good rig.

Good luck

Bob L. WB0POQ

853. How much would a PIC source cost me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: YZ7REA/45AT142 Vladimir <atomski@EUnet.yu>
Message-ID: <3893F58B.E3F6B038@EUnet.yu>
Source record: 63658
Body handling: Binary attachment payload not displayed: atomski.vcf

Hi, I'm a radio-amateur and my callsign is YZ7REA. I've made
a PLL circuit for a 1296 MHz transmitter and I wanna use a
PIC 16F84 to drive the PLL (TSA5511) via I2C bus + a 1 row
LCD-matrix display. I need 4-5 function keys for changing the
frequency, storing in memory, and move up and down trough
the menu. Is there anyone willing to give it a shot at making this
program for me. If there's anyone interested please contact me
at atomski@EUnet.yu and we'll talk about the price. I will then
supply all the neccessary data needed for programming. Thank
you in advance. Vladimir

[One or more binary attachments are retained only in the source text.]

854. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <70Tk4.7749$b01.172607@news3.mia>
Source record: 63659

If you don't require simulation you could try
Eagle Light from http://www.cadsoftusa.com/

Wilkes wrote in message ...
>In need of circuit board layout software that can perform auto route.
>
>This is for personal amateur use. Nothing overly complicated!
>
>
>Rich
>
>

855. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000130075638.22418.00000521@ng-fh1.aol.com>
Source record: 63660

Thanks to all who replied to my dumb question.

73 de John N3DRA

856. Re: Need Source for 5V VCO's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000130082140.22418.00000524@ng-fh1.aol.com>
Source record: 63661

Hi, Paul.
You didn't specify frequency range, but try Modco (www.modcoinc.com (?)). I had to research this problem just recently, and got some good units in the 1300 Mhz range from them.

73 de John N3DRA

857. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: "John Dilks, K2TQN" <oldradio@worldnet.att.net>
Message-ID: <38943855.5617@worldnet.att.net>
Source record: 63662

Tim Seguin wrote:
>
> I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> good deal or a waste of money?

While I'm not familiar with those exact kits, Ramsey is a reputable
company. I have known John Ramsey since about 1974. He runs a great
company and has many happy customers.

--
73' John Dilks, K2TQN

QST Old Radio Column - Support Page
http://www.eht.com/oldradio/arrl/

"Page 2" all about Antique Wireless & Radio History
http://www.eht.com/oldradio/awa/

The New Jersey Antique Radio Club
http://www.eht.com/oldradio/

Please visit my OldRadio Museum
http://www.eht.com/oldradio/museum/

858. FS: Drake 7 manual copies

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000130094539.26680.00000383@ng-fp1.aol.com>
Source record: 63663

For fellow Drake enthusiasts, I can provid a set of copies of manuals for the 7 line including TR-7 service manual, R7 service manual, and copies of owner's manuals for almost everything in the 7 line including general coverage mods for the TR7. $26 shipped priority mail, conus only.

73

Evan

859. Re: How much would a PIC source cost me?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38948384.A8868BD8@home.com>
Source record: 63664

You might have better luck posting on the following newsgroup:

comp.arch.embedded

If you want to try rolling your own (if I can do it, anyone can!) You can get around MPASM by using a Parallax Basic Stamp II with it's very easy to understand and program PBasic language - plus there is a lot of info on driving LCD matrix displays. Take a look at www.parallaxinc.com or www.myke.com

The BasicX BX-24 is also pretty easy to program in a language which looks like VisualBasic -www.basicx.com - they also have a ng on onelist.com

Lastly, this month's PopTronics discusses "OOPIC" - which is object embedded programming - take a look at their website: www.oopic.com

YZ7REA/45AT142 Vladimir wrote:

> Hi, I'm a radio-amateur and my callsign is YZ7REA. I've made
> a PLL circuit for a 1296 MHz transmitter and I wanna use a
> PIC 16F84 to drive the PLL (TSA5511) via I2C bus + a 1 row
> LCD-matrix display. I need 4-5 function keys for changing the
> frequency, storing in memory, and move up and down trough
> the menu. Is there anyone willing to give it a shot at making this
> program for me. If there's anyone interested please contact me
> at atomski@EUnet.yu and we'll talk about the price. I will then
> supply all the neccessary data needed for programming. Thank
> you in advance. Vladimir

860. how do i build a scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Terje Eriksen <tereriks@online.no>
Message-ID: <tyZk4.17520$in5.307767@news1.online.no>
Source record: 63665

Does anyone have a layout on a scanner who manages the frequency 148Mhz-176 Mhz.
I need a part list and the layout+a couple of tips

--
Terje Eriksen
Syrev�gveien 35
4280 Skudeneshavn
tlf. 91810940
faks. 52829593
e-mail: tereriks@online.no

861. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Tim Seguin <tatraweb@core.com>
Message-ID: <Z9%k4.1225$dq3.66920@news.corecomm.net>
Source record: 63666

(Additional) I just got my license, and I'm looking for a low budget entry into ham radio. I saw the Ramsey kits ad on their web site, but I've heard some bad things from the local hams about their kits. Has anyone out there had any experience with Ramsey kits, or Ten-Tec's kits.

Any help is appreciated.
Tim KC8NQO
Tim Seguin wrote in message ...
>I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
>good deal or a waste of money?
>
>

862. Re: F.C.C. citizen band enforcement question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Tim Seguin <tatraweb@core.com>
Message-ID: <3d%k4.1227$dq3.67662@news.corecomm.net>
Source record: 63667

If the violation occurred in a state that has their own radio misuse laws like West Virginia, it might be better to contact the sheriffs office rather than the FCC. What state is the violation occurring in?

Tim KC8NQO

863. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <r7099skuemhhvb3cjmadf6fjrvbsojr0vd@4ax.com>
Source record: 63668

"Wilkes" <rwilkes@gte.net>
shared these priceless pearls of wisdom:

->In need of circuit board layout software that can perform auto route.
->
->This is for personal amateur use. Nothing overly complicated!

I did a fairly exhaustive search of all the free/share/lowcostware programs for pcb layout and settled on Circuitmaker/Traxmaker from www.microcode.com. The "pro" version isn't terribly cheap, but there IS a downloadable student sharefreeware version that will probably do your job.

The nice part is that if you switch from personal/amateur use to professional use, there are steps along the way that will cost you a proportionate amount of $$ but your prior work will be supported by the updated versions. My hit is that the student freeware version IS the professional version with some internal crippling done.

The internal help files are very well done, and if you need a hard copy, the manuals are for sale.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

864. Re: how do i build a scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: "aaa@bbb.com" <aaa@bbb.com>
Message-ID: <3894891D.3426DB2@bbb.com>
Source record: 63669

front end : sanyo LA1186 used in almost all stereo BOOM BOXES for FM

PLL synthesizer : Nippon Precision circuits PLL2002: Use Motorola
MC145170 instead

Microcontroller : some stupid 4 bit NEC micro with 50 or so ports is used to
control the LCD and keyboard, use a ATMEL 89C52 with a telephone keypad
+ 8 *2 LCD .

IF amplifier : use motorola MC3361 , Ist IF = 10.7, 2nd IF 455 or 450

Most of these parts except the atmel and LCD can be found by taking apart an
old cordless phone !!! and a junk stereo !!!

Terje Eriksen wrote:

> Does anyone have a layout on a scanner who manages the frequency 148Mhz-176
> Mhz.
> I need a part list and the layout+a couple of tips
>
> --
> Terje Eriksen
> Syrevï¿½gveien 35
> 4280 Skudeneshavn
> tlf. 91810940
> faks. 52829593
> e-mail: tereriks@online.no

865. Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Stan Sanderson <dss@ican.net>
Message-ID: <38948894.24DFDA0C@ican.net>
Source record: 63670

Hi, Will someone direct me to a source for Max232 IC's
please. 73 Stan

866. WTB--572B's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: lordell@aol.com
Message-ID: <20000130135550.25722.00000389@ng-ff1.aol.com>
Source record: 63671

Looking for a couple of 572B's. Would perfer NOS but what have you?

867. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Erik Werner <ewerner@sprintmail.com>
Message-ID: <38949161.483AC8C1@sprintmail.com>
Source record: 63672

If you are looking for low budget entry, I'd look into 2m handhelds on ebay. Then homebrew what you need initially. In other words, homebrew a beam and the 5w from the HT will be more than sufficient for local repeaters and those not so local.

For HF, I'd also look into ebay. But like always, buyer beware, although I've not had any problems buying equipment from fellow hams.

Erik/KD5CTJ

Tim Seguin wrote:

> (Additional) I just got my license, and I'm looking for a low budget entry
> into ham radio. I saw the Ramsey kits ad on their web site, but I've heard
> some bad things from the local hams about their kits. Has anyone out there
> had any experience with Ramsey kits, or Ten-Tec's kits.
>
> Any help is appreciated.
> Tim KC8NQO
> Tim Seguin wrote in message ...
> >I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> >good deal or a waste of money?
> >
> >

868. Testing Transmitter tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Raymond Deneckere <rjdeneck@facstaff.wisc.edu>
Message-ID: <389496FA.75960215@facstaff.wisc.edu>
Source record: 63673

Hi there,

I hope this is an appropriate question to post on this newsgroup.
I have some 211 transmitter tubes, and am trying to figure out if
they are working properly for use in an audio amplifier. Could
anyone help me and outline the proper procedure for doing so?

Thanks for your help--Ray.

869. Re: Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <872cog$bu3$1@nnrp1.deja.com>
Source record: 63674

In article <38948894.24DFDA0C@ican.net>,
Stan Sanderson <dss@ican.net> wrote:
> Hi, Will someone direct me to a source for Max232 IC's
> please. 73 Stan
>
>

Try Future at www.future-active.com
or Newark at www.newark.com
or Avnet at http://www.avnet.com.au/
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

870. Re: WTB--572B's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <872d2q$c1s$1@nnrp1.deja.com>
Source record: 63675

In article <20000130135550.25722.00000389@ng-ff1.aol.com>,
lordell@aol.com (Lordell) wrote:
> Looking for a couple of 572B's. Would perfer NOS but what have you?
>

Svetlana has it (svetlana.com/docs/products/glass/572B.html)
or try RF Parts at http://www.rfparts.com/product.html for american or
russian tubes (the prices are rather 'salty'!)
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

871. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <s999gt935io143@corp.supernews.com>
Source record: 63676

```
-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

And Eagle from CadSoft is available for both Windows and Linux environments!

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- -----------------------------------------------------
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- -----------------------------------------------------
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

"bertram" <bcTRYSPAMholden@bellsouth.net> wrote in message
news:70Tk4.7749$b01.172607@news3.mia...
> If you don't require simulation you could try
> Eagle Light from http://www.cadsoftusa.com/
>
> Wilkes wrote in message ...
> >In need of circuit board layout software that can perform auto route.
> >
> >This is for personal amateur use. Nothing overly complicated!
> >
> >
> >Rich
> >
> >
>
>
-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBOJSmJpe+N6+q84HiEQKqAQCgjnQqVV8OdOC3MsEqkGTeqkmS0WUAn0nj
BepdB7wylddDYBrQIAaj1Dvn
=MFDu
-----END PGP SIGNATURE-----
```

872. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <872a96$9qe$1@bgtnsc03.worldnet.att.net>
Source record: 63677

Dan Richardson wrote in message <3893d7e0.38029110@news.mcn.org>...
>On Wed, 26 Jan 2000 19:45:25 -0500, "Al, N2NKB"
><n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:
>
>>
>>Dan Richardson wrote in message <388f219d.2597708@news.mcn.org>...
>>>I use a product called "Tunerlub" made by GC Electronics cat# 26-01.
>>>I purchased it at an electronic parts supply store. It is used to lube
>>>TV tuners, switch contacts, relays and the like.
>>>
>>>Note is used very sparingly and a small tube will be a life time
>>>supply.
>>>
>>>73
>>>Danny, K6MHE
>>>
>>
>>How many rotary or turret tuners will we clean in our lifetimes?
>>I don't miss cleaning them.
>>Al
>>
>Al,
>
>The product I recommended is a lubricant not a cleaner.
>
>Danny
>
Thanks, Danny.
I used to use "Blue Shower" for cleaning, and "Blue Stuff" for lubricating.
I'm not familiar with "Tunerlub", but I have foggy memories of some stuff like it that
came out of a squeeze tube.
Al

873. Data transmission q

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3894E1D2.BCCC748D@home.com>
Source record: 63678

I have a circuit, a voltage to frequency converter, which transmits a pulse train at around 500kHz. Will microphone cable be sufficient for a run of a few feet (i.e. less than a meter)?

874. Re: Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: quatsein@island.net
Message-ID: <3894cae6.81385369@news.cr.island.net>
Source record: 63679

Buy direct from Maxim,

http://dbserv.maxim-ic.com/sales_offices.cfm?filter=maxdist

Steve Carlisle

On Sun, 30 Jan 2000 13:53:08 -0500, Stan Sanderson <dss@ican.net>
wrote:

>Hi, Will someone direct me to a source for Max232 IC's
>please. 73 Stan
>

875. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <872fkmrlp1@newcastle.cs.ubc.ca>
Source record: 63680

"ditdah" <ditdah@fastlane.net> writes:
>BULL SHIT

You're obviously better at shouting than measuring.

Take some silicone grease and put it on an insulating surface, like plastic or glass. Then take an ohmmeter and measure the resistance between two test probes that aren't touching. If silicone grease is a conductor, as you suggest, then the resistance will be measurable.

In fact, no matter how much grease you use, and no matter how close the probes are together (as long as they are visibly not touching), the resistance indicated will be off-scale (effectively infinite) for a normal ohmmeter. Looks like it's an insulator, not a conductor.

In fact, silicone grease is a better insulator than air, in the sense that a much thinner thickness will withstand high voltage without breaking down.

Dave

876. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <872g5k$rn4$1@newcastle.cs.ubc.ca>
Source record: 63681

jim@rst-engr.com writes:

>I did a fairly exhaustive search of all the free/share/lowcostware programs for
>pcb layout and settled on Circuitmaker/Traxmaker from www.microcode.com. The
>"pro" version isn't terribly cheap, but there IS a downloadable student
>sharefreeware version that will probably do your job.

I looked there, and found the free student version of CircuitMaker.
But I don't see a free version of TraxMaker, the board layout
software. Am I missing something?

Dave

877. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Richard Wilkes <rwilkes@gte.net>
Message-ID: <f44l4.3521$aZ4.65311@dfiatx1-snr1.gtei.net>
Source record: 63682

Dave:

It is there. You will find it under Demos.
It is not useful because it is a demo version and will not allow files to be saved.

Still searching!

Rich

"Dave Martindale" <> wrote in message
news:872g5k$rn4$1@newcastle.cs.ubc.ca...
> jim@rst-engr.com writes:
>
> >I did a fairly exhaustive search of all the free/share/lowcostware
programs for
> >pcb layout and settled on Circuitmaker/Traxmaker from www.microcode.com.
The
> >"pro" version isn't terribly cheap, but there IS a downloadable student
> >sharefreeware version that will probably do your job.
>
> I looked there, and found the free student version of CircuitMaker.
> But I don't see a free version of TraxMaker, the board layout
> software. Am I missing something?
>
> Dave

878. Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Nick <nick@i.hate.spam>
Message-ID: <872mgu$9j7$1@news8.svr.pol.co.uk>
Source record: 63683
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Greetings all,

About 3 years ago, I wrote a BASIC program to print your own meter scales using a laser printer. I emailed it to a few guys and posted it on Compuserve's ham radio forum.

Sods law says I want it now & can't find it, I think it got lost during a reformat or disk crash or something. If anyone has a copy could they be so kind as to email it to me at nick90125@hotmail.com , thanks.

73
Nick g7ufg

879. Need websites for wire antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Bill
Message-ID: <3894e711_2@127.0.0.1>
Source record: 63684

I am looking for websites on how to built various wire antennas: trapped dipoles, rhombic, multi-banders, etc.

Thanks,
Bill

----------== Posted via Newsfeeds.Com, Uncensored Usenet News ==----------
http://www.newsfeeds.com The Largest Usenet Servers in the World!
------== Over 73,000 Newsgroups - Including Dedicated Binaries Servers ==-----

880. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <872q2i$lf2$1@vax.area.com>
Source record: 63685

In article <rJ5l4.2786$VJ1.5183@newsfeeds.bigpond.com>,
Graeme Zimmer <gzimmer@bigpond.com> wrote:
>I been wondering about this for ages.....
>
>If the diodes in a ring mixer are truly switching (and not just running in
>their square-law region)....... why don't we always drive a DBM with a
>square wave ?
>
>Or to put it another way, why is a sine wave important (eg why low harmonic
>content) if we must ensure sufficient LO level to make sure that the diodes
>are acting as switches ?
>
>Am following the thread with great interest
>
>direct replies would be appreciated.
>
>regards ..... Zim VK3GJZ
>
>

This is a controversial topic. My opinion (I'm sure some will disagree)
is that you want to feed a sine wave of current into the diodes and
let them make a square wave of voltage out of it. The reason for this is
that you have to pass the LO wave through a transformer and transformers
are much better for handling sine waves than square waves. It is quite
possible that phase shifts will cause the square wave to turn into a
not so square wave by the time it goes through the transformer. This
cannot happen with a sine wave. Secondly, for optimum IM3, the LO
signal should contain no even order harmonics. For a sine wave all
this requires is that you low pass filter it. For a square wave, you
have to generate exactly 50% duty cycle, and the output impedance of
the LO source must be the same for a logic high and a logic low or you
must pad it down.

Also, the distortion in a mixer is caused by the nonlinear nonzero
on resistance of the diodes, not what happens during the instant they
switch. Thus there is nothing magic about shortening this time with a
square wave.

The above notwithstanding, I have sometimes used differential ECL outputs
to directly drive mixer LO's in noncritical applications.

Rick Karlquist N6RK

881. Motorola Motrac repeater conversion???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: JJ <jjsmith@NOSPAMtcainternet.com>
Message-ID: <s99vidlg5io84@corp.supernews.com>
Source record: 63686

Has anyone successfully converted any of the Motorola Motrac mobile radios into repeaters?? (sort of like converting a Micor)

If so, please get in touch...I have three vhf mobiles that I would like to put to use and have not seen anything about converting them for repeater use.

Any info on the Motrac line would be appreciated.

Thanks in advance,
JJ

--
http://www.buzzlink.com/pp/jjanddonna

882. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-30 00:00:00 UTC
From: Keith Wood <kw@bctv.com>
Message-ID: <3894A904.D3145ABA@bctv.com>
Source record: 63687

Tim Seguin wrote:
>
> (Additional) I just got my license, and I'm looking for a low budget entry
> into ham radio. I saw the Ramsey kits ad on their web site, but I've heard
> some bad things from the local hams about their kits. Has anyone out there
> had any experience with Ramsey kits, or Ten-Tec's kits.

If you can be safely let loose with a soldering iron, the kits are
interesting and educational. You will get more bang from your buck
buying a used rig, but you will be a better ham if you build radios
instead of just being an "appliance operator."

883. Want to build VHF/UHF duplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: "L.M.Preece" <mda03@keele.ac.uk>
Message-ID: <873u4u$20r$4@cfs2.kis.keele.ac.uk>
Source record: 63595

Hello.

I want to build a VHF/UHF duplexer to combine the 2m and 70cms output of my radio to my dual-band colinear. Have searched the web but can't find any info on various sites. Pointers or any help much appreciated.

73s.

Leigh....
M1CZK
--
+ + + + + Leigh Preece + + Keele University, Staffordshire, UK + + + + +
+ + Email - Internet: leigh@media.keele.ac.uk + +
.... .- -- -.-. .- .-.. .-.. -- .---- -.-. --.. -.-

884. Need info on part: Motorola CA2870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: rogers@eng14.rochny.USpra.abb.COM
Message-ID: <000c01bf6bf5$28966e10$9a426e82@eng154.rochny.uspra.abb.com>
Source record: 63596

Hi:

I have a couple of these hybrid amps I'd like to put them into use but I only have sketchy data on them. I would like to find a data sheet for them but if someone could tell me the pin out that would be a great help!

73,
Bill
K2TER

885. Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000131084817.00992890@pop.uky.edu>
Source record: 63597

At 04:30 AM 1/31/00 -0800, you wrote:

>Date: Sun, 30 Jan 2000 13:12:08 -0500
>From: "Tim Seguin" <tatraweb@core.com>
>Subject: Ramsey Kits: to buy or not to buy?
>
>(Additional) I just got my license, and I'm looking for a low budget entry
>into ham radio. I saw the Ramsey kits ad on their web site, but I've heard
>some bad things from the local hams about their kits. Has anyone out there
>had any experience with Ramsey kits, or Ten-Tec's kits.
>
>Any help is appreciated.
>Tim KC8NQO

There are other kit manufacturers that DO have a respect for amateur
radio.
Ramsy produces kits that can easily interfere with amateur radio
operations such
as their wireless microphone kit that comes with a 2 meter crystal.
This is not only illegal for non-ham use but one way communication
is not legal with a license. They also sell a number of tunable
TV transmitters that are
able to tune the ham bands with little or no concern to make it clear that
their use
is illegal.
For kits I suggest you look at Ten Tec and Elinco. Elinco has a new 6
and 2 meter
receiver kit for around 40 dollars and they have training kits that are
easy to assemble
for the beginner that receive AM and FM broadcast band. I expect that for
now you are
interested in VHF stuff but if you want to build HF kits check out the QRP
sources.
Dan's Small Parts is a good source for parts and some kits. And their are
many others.

73
Bill wa4lav

886. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <3895ABA1.FE5400E9@concentric.net>
Source record: 63598

I have bought and built several Ramsey kits including the FX series and like them. A Ramsey radio, if assembled and tested by you, is easily modified for such things as computer control, scanning, other weird applications, etc, that one would hesitate to try with a "store-bought" radio.
Ramsey discontinued the 440 FX kit due to spurs and other problems that would not have been economical to redesign.
I'm a Ramsey fan and think their kits, especially at the new $99 prices for transceivers, are good buys, and their manuals and assembly procedures are worth the price alone. It is a very entertaining and educational process to assemble a Ramsey kit.
In the old days of kit building you had to be a decent "solderer" to get the kit working, but you really didn't learn any electronics from building it. With Ramsey kits, you build each section as a module, test it, learn how it works, etc, and really can absorb circuit theory and practice in the process.
That said, I have never built a Ramsey kit that didn't require mild modification or parts substitution (or replacing missing parts) to get working properly. Ramsey IS good about tech support and quick shipment of missing or bad parts.
I haven't built the Ten Tec kits but have read favorable reports on them, and the finished product is a much prettier radio, and likely works a bit better too, commensurate with the higher price.
Jim W5AOX

Tim Seguin wrote:

> I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> good deal or a waste of money?

887. Re: Motorola Motrac repeater conversion???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <3895ADBC.1801F0BF@concentric.net>
Source record: 63599

Motracs have been used widely in repeater projects, but not in recent
years due to the tubes in the transmitter.
The receivers are good repeater receivers, with good selectivity etc,
and all solid state.
Sorry I don't have any specific schematics etc; just advice to get
manuals and use normal transistor/IC circuits for Carrier Operated
Switches to control transmitter PTT, etc.
They actually are not (IMHO) price-effective for repeater conversions as
is unless you want to "breed" them with some sort of solid state
transmitter, a much more complex project than just taking a Micor, for
instance, and adding a controller to make a repeater out of it.
BTW, I have a couple of MSY basket-case UHF repeaters I'll GIVE you if
you'll come to NM to haul them away. These are the successors to
Motracs, with Motrac-style receivers and all solid state transmitters
(called Motrans).
Jim W5AOX

JJ wrote:

> Has anyone successfully converted any of the Motorola Motrac mobile
> radios into repeaters?? (sort of like converting a Micor) If so,
> please get in touch...I have three vhf mobiles that I would like to
> put to use and have not seen anything about converting them for
> repeater use. Any info on the Motrac line would be appreciated.
> Thanks in advance,JJ
>
>
> --
> http://www.buzzlink.com/pp/jjanddonna

888. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <874c6l$c4a$1@plutonium.btinternet.com>
Source record: 63600

> In fact, silicone grease is a better insulator than air, in the
sense
> that a much thinner thickness will withstand high voltage without
> breaking down.
==========
So don't let it get near to switch and relay contacts because it is
inclined to creep.

It's very good for keeping damp out of spark plug connectors.

889. FS: Hammarlund NZ-10 Neutralizing capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <874gt1$r88$1@nnrp1.deja.com>
Source record: 63601

FS: Hammarlund NZ-10 Neutralizing capacitors, new, $25 pair

plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

890. FS: Johnson & Eimac Tube Sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <874h8ercc1@nnrp1.deja.com>
Source record: 63602

********** SOCKETS **********

Eimac SK 510 sockets(for 4-1000A)
"New" shiny (the filament pins were once connected) $40
Used SK 510 socket $20
Overused SK 510 socket $10

"Ring" style 4 pin sockets with a small metal post similar to
Johnson 122-234, fit 5D21, 705A, 715A/B (per the Johnson catalog) used
$5 ea

Johnson 124-0311 11 pin sockets (for 8072, 8121, 8122, 3CX400, 3CX800)
used $5 ea

Johnson 122-101 7 pin socket New (terminals tarnished from age) (for
826, 832 etc.) $15

Johnson 247 & 248 / RCA UT-106 & other mfgr. 7 Pin Septar (for 8877,
829, etc) used $10ea

4CX250 family sockets --
Johnson 124-115-2 new (tarnished from age) $25 ea, used $15 ea
Eimac SK 610 (cathode grounded) used $15 ea
Eimac SK 620 used $15 ea
Eimac SK 606 Chimneys like new! :-) $10 ea.

All of the above plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

891. FS: Collins Mechanical Filters & other

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <874hetrmi1@nnrp1.deja.com>
Source record: 63603

********** COLLINS & other goodies **********

---------- 455 KHz Mechanical Filters -------

Collins F455K-15 (526-9168-00) 1.5KHz BW - tubular metal package "new"
$70

Collins F455FC 21 (526-9543-001) 2.1 KHz BW - plastic package; used $50

Kokusai MF-455ZL-21H 2.1KHz -3dB@2.1KHz, -6dB@2.5KHz, -66dB@4KHz.
Rectangular metal package "new" $50

---------- Crystal Filters ------------------

McCoy 48B1 Golden Guardian 9 MHz Filter w/matching BFO crystals NIB $50
same thing UIB (used in box) $35

All of the above plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

892. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <6qfb9s81ld4vtkebm68rubpmauknq5vga9@4ax.com>
Source record: 63604

On 30 Jan 2000 17:55:30 -0800, rick@vax.area.com (Richard Karlquist)
wrote:

>In article <rJ5l4.2786$VJ1.5183@newsfeeds.bigpond.com>,
>Graeme Zimmer <gzimmer@bigpond.com> wrote:
>>I been wondering about this for ages.....
>>
>>If the diodes in a ring mixer are truly switching (and not just running in
>>their square-law region)..... why don't we always drive a DBM with a
>>square wave ?
>>
>>Or to put it another way, why is a sine wave important (eg why low harmonic
>>content) if we must ensure sufficient LO level to make sure that the diodes
>>are acting as switches ?
>>
>
>This is a controversial topic. My opinion (I'm sure some will disagree)
>is that you want to feed a sine wave of current into the diodes and
>let them make a square wave of voltage out of it. The reason for this is
>that you have to pass the LO wave through a transformer and transformers
>are much better for handling sine waves than square waves. It is quite
>possible that phase shifts will cause the square wave to turn into a
>not so square wave by the time it goes through the transformer. This
>cannot happen with a sine wave. Secondly, for optimum IM3, the LO
>signal should contain no even order harmonics. For a sine wave all
>this requires is that you low pass filter it. For a square wave, you
>have to generate exactly 50% duty cycle, and the output impedance of
>the LO source must be the same for a logic high and a logic low or you
>must pad it down.
>
>Also, the distortion in a mixer is caused by the nonlinear nonzero
>on resistance of the diodes, not what happens during the instant they
>switch. Thus there is nothing magic about shortening this time with a
>square wave.
>
>The above notwithstanding, I have sometimes used differential ECL outputs
>to directly drive mixer LO's in noncritical applications.

One question, Rick:

Let's assume we are driving the mixer with the output from a sine wave
going through a limiter (perhaps this is from some sort of synchronous
detector scheme).

Even if the LO transformer saturates, aren't the diodes already biased on? How would the LO transformer saturation make any difference?

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

893. Re: Data transmission q

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <W0ll4.559$OI1.23105@news5.giganews.com>
Source record: 63605

It depends. To do this properly, you need to make some decisions.

First, what is the source impedance and rise time of the pulses?
Second, what is the slowest rise time you can accept?
Third, what is the load impedance (complex impedance preferred)?
And finally, what is the capacitance of the shielded cable?

You have a voltage divider here that is frequency dependent. The capacitance of the cable is put in parallel with the load. So you have a low pass filter, and the cutoff frequency will determine the degradation of the pulse rise and fall times.

All this presumes that the cable length is a very small fraction of a wave length at the highest frequency component of concern. If this is not the case, then tell us the cable length and velocity constant.

So it's not that simple. Give us some of the parameters above and we can help figure out the pulse degradation.

73, Bob K6DDX

894. Re: Testing Transmitter tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <X0ll4.560$OI1.23105@news5.giganews.com>
Source record: 63606

The things that can go wrong with the tubes, and for which you ought to test, are:

1. interelectrode shorts
2. Insufficient filament emission
3. gas

The proper procedure would be to apply filament voltage, then measure plate to grid, plate to filament, and grid to filament resistance. (Make the plate and grid negative with respect to the filament.) If the resistance is high, while gently tapping the glass (lightly snap your fingernail against the side of the tube), there are no shorts.

Apply grid bias and plate voltage. Measure plate current, according to the tube characteristics in the book, being careful not to exceed plate dissipation ratings. If the current is within about 10% of the data, and there is no blue glow in the tube, you are probably okay. The current should also remain steady and not fall off. It's not important to apply a high potential to the plate but you should try to operate at a fairly high plate current to verify the emission capability of the filament.

73, Bob K6DDX

895. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <01ll4.996$d61.23763@news6.giganews.com>
Source record: 63607
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

I found a better way to print meter scales.

I carefully remove the scale plate from the meter and put it in a scanner. Take the scanned image and alter it as desired with any graphics program, then print.

Cut the printed copy to size and paste it over the scale plate. If you don't want to mess up the original, turn it over and paste it on the back side. Then reassemble the meter (back side out if you did it that way).

I did this with some meters that had black face and I wanted white face. I didn't alter the markings but inverted the colors and got a lovely result. It's worked great with no problems.

But you must be very careful not to damage the pointer or bearings nor allow any metal pieces to be attracted by the magnets.

73, Bob K6DDX

896. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Joe Malloy <jmalloy@borg.com>
Message-ID: <3895dcdf.0@nntp2.borg.com>
Source record: 63608

I'd buy a T-Kit (by Ten-Tec) rather than a Ramsey. I built an audiofilter sold by Ramsey electronics, model AF-1, and it works quite well, has a nice feature of its own rectifier so it doesn't matter if you hook up ac or dc (and the dc can be connected either way!). But the case and controls are rather flimsy, sorta like the the input and output jacks are, in that they're mounted on PC board and rely on solder connections (largely) to keep them put. This kit isn't constructed in a way to inspire confidence. On the other hand, I also assembled a 1330 -- the 30M version of the Ten-Tec kit series -- and I think it's like a tank! You have to be careful with the board and the two mounting plates (one is the heat sink for the output and one hold the three pots) but once assembled into that steel trap they call a case, nothing short of nuclear bombs would hurt it! (Ok, so I exaggerate a little bit!) It works very well, too.

You might want to consider the Small Wonder Labs stuff by NN1G -- I just built the DSW-40, a 40 QRP radio that's digitally tuned (and hence rock stable), with its own keyer, frequency annunciator (press a button and the things reads you back your frequency in morse), RIT -- you name it, it's got it -- all except an AGC, but that's expecting too much, me thinks. And it's small! It cost about $130 complete, so it's somewhat more expensive than Ten-Tec, but it's a blast (hmm, that missing AGC....). It's available for 80, 40, 30, and 20 (so far). Check it out. The only problem I'm having is transmitting: I can hear the LO putting out a signal, but I don't have any voltages in the amp circuit...but give me time!

73,

Joe W2RBA

Jake Brodsky <frussle@erols.com> wrote in message news:aegb9ssmt6rsbemjasusebpd08sk48ct1n@4ax.com...
> On Sun, 30 Jan 2000 13:12:08 -0500, "Tim Seguin" <tatraweb@core.com>
> wrote:
>
> >(Additional) I just got my license, and I'm looking for a low budget entry
> >into ham radio. I saw the Ramsey kits ad on their web site, but I've heard
> >some bad things from the local hams about their kits. Has anyone out there
> >had any experience with Ramsey kits, or Ten-Tec's kits.
>
> I'd buy a Ten Tec before I'd buy a Ramsey kit. I've built a few of
> Ramsey's kits. The problems I've seen mostly relate to unreliability.
> Often they lack enough decoupling capacitors of a reasonable type.

> Once you add those capacitors in to the picture, the projects tend to
> work much better.
>
> That said, if you don't mind the fuss factor, Ramsey's kits usually
> work.
>
> Incidentally you may want to check out the web site for Ramsey's
> account of a federal raid on his operation. Even if only a few parts
> of his account are true (and I have no reason to doubt any of it) this
> is a frightening use of the office of the Federal District Attorney.
>
>
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"

897. Need Info on Ancient Moniscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Robert Giel <giel@earthlink.net>
Message-ID: <3895DD9B.70F7C019@earthlink.net>
Source record: 63609

Does anybody ("old timers?) have a schematic on the old Moniscope Model 206?
It was manufactured by American Electronics Enterprises of Long Beach, California.

I'd appreciate a schematic on this scope. My dad wants to repair it and then modify it for use as a monitor.

TIA
Bob Giel

898. Wire antennas and tuned circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: heildg@my-deja.com
Message-ID: <8752gp$9d6$1@nnrp1.deja.com>
Source record: 63610

I am looking into building my own PCM receiver for R/C airplanes. I've seen several example circuit that have a LC tuned circuit at the base of the wire attenna.

What does this circuit do to the frequency responce?
What are the design rules for choosing values?

Thanks,

Dave

Sent via Deja.com http://www.deja.com/
Before you buy.

899. Re: WTB MC13135/36, MC3371/72

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: heildg@my-deja.com
Message-ID: <87535m$9s7$1@nnrp1.deja.com>
Source record: 63611

Newark has them available.

In article <86m951$ib2$1@burn.ab.videon.ca>,
klocworx@v-wave.com (Arthur) wrote:
> Hi all,
> need small quantity of these Motorola FM chips:
> MC13135/36 MC3371/72.
> Thanks,
> Arthur Kloc, VE6BOE
> klocworx@v-wave.com
>

Sent via Deja.com http://www.deja.com/
Before you buy.

900. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <aegb9ssmt6rsbemjasusebpd08sk48ct1n@4ax.com>
Source record: 63612

On Sun, 30 Jan 2000 13:12:08 -0500, "Tim Seguin" <tatraweb@core.com>
wrote:

>(Additional) I just got my license, and I'm looking for a low budget entry
>into ham radio. I saw the Ramsey kits ad on their web site, but I've heard
>some bad things from the local hams about their kits. Has anyone out there
>had any experience with Ramsey kits, or Ten-Tec's kits.

I'd buy a Ten Tec before I'd buy a Ramsey kit. I've built a few of
Ramsey's kits. The problems I've seen mostly relate to unreliability.
Often they lack enough decoupling capacitors of a reasonable type.
Once you add those capacitors in to the picture, the projects tend to
work much better.

That said, if you don't mind the fuss factor, Ramsey's kits usually
work.

Incidentally you may want to check out the web site for Ramsey's
account of a federal raid on his operation. Even if only a few parts
of his account are true (and I have no reason to doubt any of it) this
is a frightening use of the office of the Federal District Attorney.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

901. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: "J. Strupat" <john.strupat@sympatico.ca>
Message-ID: <ggpl4.9825$gi.145718@news20.bellglobal.com>
Source record: 63613

Sandor,

At the risk of disagreeing with the other replies, you should have no real problems with using a diode between each power supply and the rig.

A cheap way to try this out is to buy a 25 A bridge rectifier ($4) and connect the + terminal to the + terminal on the rig and the other terminals marked with a ~ AC symbol to each power supply +ve terminal. The -ve terminal of the bridge is left unconnected. You will need a heat sink on the bridge rectifier and preferrably a little thermal transfer compound between the two.

Connect the -ve outputs from both power supplies together at the - terminal of the rig.

This setup will drop the voltage output from the power supply (13.5) to around 12.5 or less at full load.

You can try this out with one power supply at a time, if you want.

John VE3PCN

"KG4FET" <kg4fet@aol.com> wrote in message
news:20000122103152.03575.00000934@ng-cf1.aol.com...
> I need to stack 2 pwr supplies to supply my FT 100 with the proper
current. My
> AIM 20 is getting to hot for my tastes. I get full out of the radio but
the
> supply is way to hot if I do any rag chewing. I put a fan on it and that
seems
> to help but I would like to take it easier on it. Here is the question.
Can I
> hook the second supply directly to the the AIM's output or should I use a
bus
> strip? The second supply is a Johnson Power 15 amp rated supply used for
a
> Johnson business band base radio. The output voltage is the same on on
both
> (13.98+/-.03 volts). There is not a switch on the Johnson pwr supply to
turn
> it off, but that can be fixed.
> Any Help would be appreciated,
> Sandor KG4FET

902. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <875ifedit1@vax.area.com>
Source record: 63614

In article <6qfb9s81ld4vtkebm68rubpmauknq5vga9@4ax.com>,
Jake Brodsky <frussle@erols.com> wrote:

>One question, Rick:
>
>Let's assume we are driving the mixer with the output from a sine wave
>going through a limiter (perhaps this is from some sort of synchronous
>detector scheme).
>
>Even if the LO transformer saturates, aren't the diodes already biased
>on? How would the LO transformer saturation make any difference?

When I was talking about the transformer not passing a square wave,
I was referring to phase shift problems (or you could describe it
as different group delay for different harmonics). This is a problem
even at low levels where the transformer is linear.

I can't imagine why you would want to saturate the transformer in
a mixer.

Rick Karlquist N6RK

903. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <875ioi$e1h$1@vax.area.com>
Source record: 63615

In article <uh6c9sclougkisk68bek3ps532qh1dmko6@4ax.com>,
Lasse Moell <lasse.moell@swipnet.se> wrote:
>Hmm,
>I guess there more to this than one might thing at first sighting!
>The "Paramixer" made by Steinbrecher in the late 80s did use matched
>diodes for switching but used fet-drivers to get the square wave!
>
>This mixer acheived IP in the +50 dBm performing excellent!!
>
>Wish I had more information about this one.
>
>Anyone read the patent??
>
>/Lasse SM5GLC

Yes, I have read the Steinbrecher patent. He has a clever topology
that causes the transformer to see a constant linear resistive load
rather than the usual "funny" load of the diodes. In this case,
you actually have some hope of getting a square wave through the
transformer in decent shape, although you have to extend the
frequency response of the transformer considerably. This is a
great mixer but comparing it to an SBL-1 is apples vs oranges.

Rick Karlquist N6Rk

904. Re: Trimming a crystal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Rich Peet <peet@citilink.com>
Message-ID: <Mkul4.35$%j3.9335@ptah.visi.com>
Source record: 63616

The suggestion should have been complete enough to state that you need a hf rig with a bfo to check the crystal. That is a rig that can receive SSB or CW. If all you have is an AM rig then use that quite spot as you are in the neighborhood and good enough. The others that have recommended procedures are fine if your rig has a bfo and that is a bit more accurate way to do this.

"Jack Edmunds" <JEdmunds@prodigy.net> wrote in message news:86v1ug$5rug$1@newssvr03-int.news.prodigy.com...
>
> I am building a kit radio and has a 4.0MHz crystal that needs to be checked
> to see that it is running at 4 MHz. The suggestion is to set a hf rig at
> 4.00MHz and then adjust the trimmer until "the oscillator signal is at a
> perfect null or zero-beat".
>
> I have adjusted the trimmer until the signal has become quiet. Is that what
> they mean by the above?
>
> Thanks, Jack
>
>

905. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <3895B936.9667FBAF@netdoor.com>
Source record: 63617

John, Please, please, never do that again...there are just too many opinions on what is the proper lubricant for the roller inductor. All a question like that can do is lead up to a flame war. You see that now don't you?

Butch Magee KF5DE

PS: Ear was is the proper lubricant for the damn thing. The other posters are nothing but dumb asses' and obviously raised in an asylem. Ear wax you geeky wig head!! :o)

JPhelan501 wrote:

> Thanks to all who replied to my dumb question.
>
> 73 de John N3DRA

906. Re: Need Info on Ancient Moniscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Bgvl4.1331$OI1.58726@news5.giganews.com>
Source record: 63618

Bob, I don't have a diagram but I could practically draw one if you would give me the tube complement in that unit.

73, Bob K6DDX

907. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <874v31$9kr$1@newcastle.cs.ubc.ca>
Source record: 63619

"Richard Wilkes" <rwilkes@gte.net> writes:
>It is there. You will find it under Demos.
>It is not useful because it is a demo version and will not allow files to be
>saved.

I saw that, and as you point out it's useless for real work. This is
quite different from CircuitMaker, where in addition to the demo version
there is also a student version that's fully usable.

Dave

908. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <874vdl$9lt$1@newcastle.cs.ubc.ca>
Source record: 63620

"Reg Edwards" <g4fgq.regp@btinternet.com> writes:

>It's very good for keeping damp out of spark plug connectors.

It's good for keeping dirt out of all kinds of low-voltage connectors
too, especially things like headlamp sockets that are exposed to
water spray.

Dave

909. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <872mqb$jp9$3@campus3.mtu.edu>
Source record: 63688

Tim Seguin <tatraweb@core.com> wrote:
> I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> good deal or a waste of money?

--> Seems like I've heard these kits have some serious alignment and spurious emmissions problems, but that was a long time ago. There were 'fixes' for them. Do a web and Dejanews search and see what you come up with.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"[Television] won't be able to hold on to any market it captures after the first six months. People will soon get tired of staring at a plywood box every night." -- Darryl Zanuck, 20th Century Fox Studios chief, in 1946.

910. Increasing scan rate on TR-7850?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <872n4j$jp9$4@campus3.mtu.edu>
Source record: 63689

I have an old Kenwood TR-7850, and while I really like the radio, I do have one complaint. The scan rate is *glacial*. On the order of 1 or 2 channels per second. While I don't consider this a huge problem, I'm wondering if there's a mod to speed this up. Or is the problem just that that's all the faster the PLL can lock onto a new frequency?

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"[Television] won't be able to hold on to any market it captures after the first six months. People will soon get tired of staring at a plywood box every night." -- Darryl Zanuck, 20th Century Fox Studios chief, in 1946.

911. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: Graeme Zimmer <gzimmer@bigpond.com>
Message-ID: <rJ5l4.2786$VJ1.5183@newsfeeds.bigpond.com>
Source record: 63690

I been wondering about this for ages.....

If the diodes in a ring mixer are truly switching (and not just running in their square-law region)..... why don't we always drive a DBM with a square wave ?

Or to put it another way, why is a sine wave important (eg why low harmonic content) if we must ensure sufficient LO level to make sure that the diodes are acting as switches ?

Am following the thread with great interest

direct replies would be appreciated.

regards ..... Zim VK3GJZ

912. Re: Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: <>
Message-ID: <po6l4.6136$ox5.2042808@tw11.nn.bcandid.com>
Source record: 63691

Digikey has several versions of the MAX232.

http://www.digikey.com

Don AF4Z

In article <38948894.24DFDA0C@ican.net>, dss@ican.net says...
>
>Hi, Will someone direct me to a source for Max232 IC's
>please. 73 Stan
>

913. need info on INFO-TECH M93 RTTY Terminal unit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: <>
Message-ID: <pB6l4.6154$ox5.2049991@tw11.nn.bcandid.com>
Source record: 63692

I would like to get a copy of the operators manual and schematic for a
INFO-TECH M 93 Terminal unit.

If you can help, pse email me.

Don AF4Z
af4z@palmnet.net

914. Re: Data transmission q

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3895480D.53AD@pop.removethistomailme.net>
Source record: 63693

JW wrote:
>
> I have a circuit, a voltage to frequency converter, which transmits a
> pulse train at around 500kHz. Will microphone cable be sufficient for a
> run of a few feet (i.e. less than a meter)?

Shouldn't be a problem, assuming it's shielded or at least UTP
(unshielded twisted-pair), and not used in an extremely noisy
environment.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

915. L.O.S.A - List of Stamp Applications [000127]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-01-31 00:00:00 UTC
From: cjX@hth.com
Message-ID: <3892f934.3882074@news.sverige.net>
Source record: 63694
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

Hi,

Below is the latest index of L.O.S.A and you can download the
complete L.O.S.A from the following places...

WWW:

http://www.hth.com/losa/

FTP:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

1.0 What is L.O.S.A all about?

This list was started back in -95 when I heard about (more or less)
uniqe problems that was solved by using a BASIC Stamp. Especially Guy
Gustavson's story (see #001) about how he saved his beloved cat Kesha
gave me the inspiration to start writing L.O.S.A. I hope Kesha still
is alive and having a great life. Now 4 years later there are 150+
applications described and I hope you will enjoy reading all (or
parts) of them.

The main purpose of this list is to get an idea of what other people
are using their BASIC Stamps for and maybe get some inspiration or
hints for your own projects. Some of the projects described in the
list also have links to source code and schematics for download.

1.1 How can I contribute to this list ?

If you have done something (big or small) with the BASIC Stamp that
you are willing to tell others please use the form given below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Visit the following Web site and fill in the contribution form...

http://www.hth.com/losa/

1.2 Why are some links dud's ?

Since people changes their e-mail and web addresses some links may be
dud's. If you previously contributed with one (or more) of the
applications please take a quick look and check your e-mail address

and/or web-links. I'm only able to keep the list updated if I'm
informed about changes, thanks in advance.

1.3 List of contributions

> = Indicates a new or updated application since last time.

001 Robo-Cat
002 Logic Rudder
003 Interfacing MAX186 8 channel 12bit A/D
004 Scrolling LED Sign
005 Tone Decoder
006 Pager
007 HexWalker Mobile Robot
008 Robo Bug
009 EXPBOT Robot controlled by Stamp
010 Andrews Ever Evolving Lego Robot
011 Factory Monitoring System
012 Wave to the Cats/Desk Temperature
013 Gamer's Die Roller
014 Stamp II Serial I/O
015 Voice and CW Fox Hunt Transmitter IDer
016 Lift (elevator) Controller
017 Paging with the Stamp
018 Switching Sytem
019 Door Entry Card Reader
020 Telephone Card Reader
021 DTMF Decoder
022 Ion chamber radiation monitor
023 Barn Monitor
024 Dallas one-wire interface
025 Sculpture control
026 Commercial clothes dryer controler
027 Morse Code Keyer
028 Traffic Light Controller
029 Automotive Lamp Control
030 Single Switch Scanning Device for Disabled
031 Bell timer for school bell control
032 RIMS controller for beer making
033 Stamp 1 and ISD 25XX Sound Chip Application
034 Camera Wireless Controller
035 Simple Battery Check using the BS2-IC
036 Photocell MIDI Controller
037 DCF-Clock
038 Radio-controlled Digital Clock
039 Weather Station I
040 Private Aid To Navigation
041 Stamp II in Space
042 MAT32 long integer math routines
043 Distinctive Ring Detector

044 Extended Stamp Memory
045 Debate Stoplite
046 Digital nametag
047 ST506 Disk Seeking Demo Controller
048 Robot: Multi-Stamps Communicate via Shared Memory
049 NiMH Battery Charger/Conditioner
050 555 Timer as A/D Converter
051 Bits of Light
052 Process Control
053 Near Space Capsule
054 PIC Debugger
055 DS1820 Temp Sensor
056 Air muscle hexapod robot
057 Lights
058 Caller-ID Interface
059 Wind speed and wind direction measurement device
060 Calibrated Dust Feeder for Air Cleaner Tests
061 Use of a Serial EEPROM as a Lookup Table
062 Displaying Quantities on a 200 mV Panel Meter
063 Programmable Proportional Air Valve
064 Basic Stamp machine control application
065 Compass Interface for Navigation
066 Truck + ? identification
067 Meteoreological Station
068 Stamp Controls Electronic Tester for flex circuits
069 Game Timer
070 Photoghrapic light meter
071 Data System Remote Control on unmanned aircraft
072 Speaking Instructor
073 Small Mobile Robot
074 R/C helicopter altitude control unit
075 Automobile Rally Odometer Interface to Laptop
076 LCD drivers
077 Stamp I / PC Interface Demo
078 Stamp Photo Meter
079 Stiquito(TM) 97 HexaPod Robot
080 XRaCS DTMF Radio X10 Control with Voice Response
081 Interfacing the Basic Stamp 2 with I2C Devices
082 The WeatherStamp Meteorological Station
083 Maxxum 7000 Remote Release Widget
084 Xs And Os games for college project
085 Stamp II Mouse Emulator (Version 6)
086 Basic Alarm System
087 Interfacing with a Printer
088 Dinosaur Quiz Game
089 Chemical Injection System
090 RS-232 connections between Stamp and host
091 Video Character Overlay Generator Controller
092 Suction tube depth measurement display
093 Electronic Compass with Basic Stamp 2

094 Event Logger with 8K 24C65 I2C memory
095 Fixing the depth of a suction-pipe with the BS 2
096 Superchaser
097 Corky'z Robotz
098 Cloudrider: analog network with BS2 and BS1's
099 Yet Another Real Time Clock, Dallas DS1287
100 Amateur RadioSatellite Tracking (Az/El) Controller
101 DTMF Decoder
102 PC to STAMP via RS232 routines
103 PC Frequency Counter
104 Sub-Millisecond Reaction Timer
105 Computerized Dynamics Cart
106 Ham Radio Interface Using the Basic Stamp 2
107 Remote tempsensors communicates over the power lines
108 Interfacing a BASIC Stamp to SRAM
109 Stepper controller pulse generator
110 Automatic rang caller
111 Automatic emergency broadcast system
112 BASIC Stamp I as an welding machine
113 PLM-24 to X-10 Gateway
114 Semi-Automated Combusitible Gas Indicator Tester
115 Counter-rotating Servos
116 Joystick Controlled Robotic Arm
117 Anti Traction Control Device
118 Cat Chasing Lego Robot and Other Circuits
119 Camlift
120 Control 15 Servos in Parallel
121 8 Digit "Smart" Alphanumeric Display
122 Cycle Testing AC Motor Controller
123 Controlling an LCD by BS2 via I2C Bus
124 The Newcastle Robotic Bilby Project
125 The EM1 (Electric mule)
126 Distance Measurement with GP2D02 SHARP Sensor
127 TI82 Interface
128 Operator Interface for Multiple Stamps
129 Infrared Glucose (Blood Sugar) Monitor
130 Fox For ham radio or Automated Propogation Beacon
131 GPS Data Overlay on Video
132 10Base-T Cable Tester
133 Kodak DC40/50/120 camera control
134 Implement S.N.A.P network protocol in a BASIC Stamp
135 Stamp/PC RS-485 Network
136 Easy-to-build BS keyboard/display w/ 10 keys/LEDs
137 Joystick control: BS2, 2 motors & 2 HBridges
138 Basic Stamp 2 Mobile Robot
139 Home Automation and Security System
140 UM3750 Read Code
141 Magnetic Stripe Reader
142 Telephone Remote Control and Remote Alarm
143 Tube preamplifier control section

144 Interrupt for PBASIC
145 dLOG
146 Compass
147 BS-2 serial VISCA interface
148 Servo tester
149 Small-bot
150 Repeater Controller
151 ESD Tester for Foot and Wrist Straps
152 Beneficial Insect Dispenser
153 Bugsey
154 Vector2X Compass Module with the new BS2SX Stamp
155 Serial Mouse to BS2 Interface
156 Radio Repeater Controller
157 Keypad reader
158 Automatic Vehicle Location / Mobile Asset Tracking
159 Interfacing a 4X4 keypad to the stamp II
160 Interfacing a Max186 8 Channel ADC to a stamp II
161 Realistic Manual Shifter for PC Driving Games
162 Contact ID handshake board
163 Basic Stamp II I2C protocol for several ICs
164 Home Controller
165 Coinmachine
166 Navigation system for the blind
167 Robot Fighters
168 Octobot
169 SPI interface chip
170 Implementing TCP/IP functionallity
171 Home Security System
172 Garage Door Opener
173 New Method Of Home Automation
174 Water Volume Meter
175 Table-Top Practice ROBOT for USFirst Competition
176 Model-rocket acceleration measurement
177 Interface to SPECTRON MICRO-50 2 Axis Inclinometer
># 178 Interface for electromechanical coinpasser
># 179 RCS (Remote Controlled Stepper)
># 180 Making robots really small

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-
Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-

916. Re: Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: David Little <dalite01@sprynet.com>
Message-ID: <877spm$3vc$1@nntp3.atl.mindspring.net>
Source record: 63545

I don't know if anyone else has mentioned this, but Maxim will send out up
to 8
samples free for the asking on most items in their product line.....

Stan Sanderson <dss@ican.net> wrote in message
news:38975F18.93F24C5E@ican.net...
> Many thanks to all of you that took the time to give me some
> leads. 73 Stan VA3DS
>
> Don Winn wrote:
>
> > Digikey has several versions of the MAX232.
> >
> > http://www.digikey.com
> >
> > Don AF4Z
> >
> > In article <38948894.24DFDA0C@ican.net>, dss@ican.net says...
> > >
> > >Hi, Will someone direct me to a source for Max232 IC's
> > >please. 73 Stan
> > >
>

917. Hamfest, Buffalo, NY Feb. 20.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: AAAjim_cronin@juno.com.ZZZ
Message-ID: <7xiXOL9=hTUNRGH1aC5BBGuTqCst@4ax.com>
Source record: 63546

The Greater Buffalo Winter Hamfest, Sunday Feb. 20 at 8 AM.

It's at the Leonard Post VFW, 2450 Walden Ave, Cheektowaga, NY, about
1 mile from the NYS Thruway. From I-90 take exit 52 East.

Talk-in frequency 147.255+

For info:
Phone: 716-634-4667 days, ask for Luke.
Email: lcalianno@freewwweb.com
Web: http://hamgate1.sunyerie.edu/~larc

918. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: larryc@northwest.com
Message-ID: <3897906C.45E1@northwest.com>
Source record: 63547

it's also mentioned in the RSGB VHF manual by Jessop. It's known as
commutation mixing.
==========

John Miles wrote:
>
> Tom Bruhns wrote:
> >
> > I'm aware that there are those who would suggest you drive the LO port
> > with a square wave current source. It seems to me that there is no
> > danger of saturating any cores that way, any more than if you drive it
> > with the same current level some other way.
> >
> > Seems like it would be an easy enough test to do. You'd want to know
> > what things you wanted to characterize: IP3, P1db, etc. Surely someone
> > out there has done tests like this before. Is there anything definitive
> > in Steven Maas's book on DBDM's? (I think that's the guy who has
> > written books and magazine articles on the subject.)
>
> For what it's worth, the FAQ in the Mini-Circuits designer's guide
> claims it's perfectly kosher to drive their DBMs with a square wave.
> Don't have the exact quote handy, but it's one of their FAQs.
>
> -- jm
>
> ----------
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> ----------

919. Question: D-104 mic integration to FT-920

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: "John (KB3CDF)" <murphman@erols.com>
Message-ID: <3897A70E.F2438197@erols.com>
Source record: 63548
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Howdy:

Need help matching D-104 mic to FT-920 (Yaesu). Aside from the connector selection, can any "GURU-ELMER - HAM" tricks of the hobby be shared. Perhaps, other research can be suggested. A "point" in the right direction would be a great start.

Thanks in advance.

--
~~~ ~~~ ~~~ ~~~
KB3CDF
John L. Murphy
73
~~~

920. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <878ahudqa1@vax.area.com>
Source record: 63549

In article <mcud9sghkr2ogfhmco0af0vtsqduc0t078@4ax.com>,
Jake Brodsky <frussle@erols.com> wrote:
>On 31 Jan 2000 19:04:14 -0800, rick@vax.area.com (Richard Karlquist)
>wrote:
>
>Let me restate the question: Would the group delay effects of a square
>wave signal propagating through a transformer actually cause a diode
>to drop out of conduction when it is actually expected to stay on?
>Conversely, would group delay effects through the transformer actually
>cause the diodes to stay in conduction when they're supposed to be
>switched off?
>
>I can envision a situation where the hysteresis effects of a
>transformer might cause a phase shift of the LO once it gets to the

The distortion of a square wave by a transformer can occur without
any nonlinear core effects such as hysteresis or distortion. If
you pass a square wave through any network, such as a transformer,
than does not have flat frequency response and linear phase, you
will get a distorted square wave out. It may have overshoot, it
may have rounded off corners, and/or it may have droop. Thus the
waveform that is presented to the diodes will not be a perfect
square wave and it will not turn the diodes on the same as it would
if it were a perfect square wave. Suppose the transformer winding
capacitance causes a funny suckout at some harmonic of the square
wave. If you delete that harmonic, the wave will acquire a bunch
of wiggles. If you had used a sine wave, you wouldn't have to
worry about a suckout at a harmonic.

I hope that answers the question, and again, I never said you can't
use a square wave, it just isn't generally the optimum thing to do.

Rick Karlquist N6RK

921. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <878au4efk1@vax.area.com>
Source record: 63550

In article <389744A0.B6084409@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
>I'm aware that there are those who would suggest you drive the LO port
>with a square wave current source. It seems to me that there is no
>danger of saturating any cores that way, any more than if you drive it
>with the same current level some other way.

The reasons for not using a square wave have nothing to do with
core saturation.

>Seems like it would be an easy enough test to do. You'd want to know
>what things you wanted to characterize: IP3, P1db, etc. Surely someone
>out there has done tests like this before. Is there anything definitive
>in Steven Maas's book on DBDM's? (I think that's the guy who has
>written books and magazine articles on the subject.)

I don't remember seeing anything about that in his book. It is
excellent for what it covers, but it doesn't cover everything.

I did some characterization of a W-J M9E mixer in conjunction with my
1996 FCS paper, and I found that it was critical to heavily low pass
filter the LO drive to the mixer in order to get the best IMD.
So that is some kind of a data point.

If you propose to use a square wave, tell me how we generate this
square wave. How do we get exactly 50% duty cycle? I can get
arbitrarily close to 50% duty cycle if I use a sine wave by just
filtering the dickens out of it.

Rick Karlquist N6RK

922. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <878ba2$ev4$1@vax.area.com>
Source record: 63551

In article <38974FE8.754B@pop.removethistomailme.net>,
John Miles <jmiles@pop.removethistomailme.net> wrote:
>
>For what it's worth, the FAQ in the Mini-Circuits designer's guide
>claims it's perfectly kosher to drive their DBMs with a square wave.
>Don't have the exact quote handy, but it's one of their FAQs.

Well, W-J doesn't recommend this. I would tend to believe them.
Mini-Circuits' talent lies in low cost manufacturing, not mixer
theory.

Rick Karlquist N6Rk

923. Re: Need Source of single chip FM rcvr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <879viacvo1@nntp8.atl.mindspring.net>
Source record: 63552

In article <Pine.GSO.3.95.1000124172537.11757C-100000@oso.slonet.org>,
Clifford Buttschardt <cbuttsch@slonet.org> wrote:
>Yes I know of these manufacturers. I need specific information on chips
>that hams can obtain. It is important to differentiate between hams and
>the users of thousands of chips used in modern manufacturing. Cliff K7RR

Try the specialist repair parts distributors like MCM and Dalbani
(or the NTE and ECG universal replacment stuff) for consumer stuff.
I can't think of any other easy way to get east asian chips. And
it seems that Toshiba, Sanyo and others have that market these days.
And for newer chips you can even find the datasheets if you web surf
their .jp (in Japan) web sites. (The .com ones are often their US sales
operations and are worthless for anything not new or digital).

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

924. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Lasse Moell <lasse.moell@swipnet.se>
Message-ID: <uh6c9sclougkisk68bek3ps532qh1dmko6@4ax.com>
Source record: 63621

Hmm,
I guess there more to this than one might thing at first sighting!
The "Paramixer" made by Steinbrecher in the late 80s did use matched
diodes for switching but used fet-drivers to get the square wave!

This mixer acheived IP in the +50 dBm performing excellent!!

Wish I had more information about this one.

Anyone read the patent??

/Lasse SM5GLC
On 30 Jan 2000 17:55:30 -0800, rick@vax.area.com (Richard Karlquist)
wrote:

>In article <rJ5l4.2786$VJ1.5183@newsfeeds.bigpond.com>,
>Graeme Zimmer <gzimmer@bigpond.com> wrote:
>>I been wondering about this for ages.....
>>
>>If the diodes in a ring mixer are truly switching (and not just running in
>>their square-law region)..... why don't we always drive a DBM with a
>>square wave ?
>>
>>Or to put it another way, why is a sine wave important (eg why low harmonic
>>content) if we must ensure sufficient LO level to make sure that the diodes
>>are acting as switches ?
>>
>>Am following the thread with great interest
>>
>>direct replies would be appreciated.
>>
>>regards .... Zim VK3GJZ
>>
>>
>
>
>This is a controversial topic. My opinion (I'm sure some will disagree)
>is that you want to feed a sine wave of current into the diodes and
>let them make a square wave of voltage out of it. The reason for this is
>that you have to pass the LO wave through a transformer and transformers
>are much better for handling sine waves than square waves. It is quite
>possible that phase shifts will cause the square wave to turn into a
>not so square wave by the time it goes through the transformer. This
>cannot happen with a sine wave. Secondly, for optimum IM3, the LO
>signal should contain no even order harmonics. For a sine wave all
>this requires is that you low pass filter it. For a square wave, you

>have to generate exactly 50% duty cycle, and the output impedance of
>the LO source must be the same for a logic high and a logic low or you
>must pad it down.
>
>Also, the distortion in a mixer is caused by the nonlinear nonzero
>on resistance of the diodes, not what happens during the instant they
>switch. Thus there is nothing magic about shortening this time with a
>square wave.
>
>The above notwithstanding, I have sometimes used differential ECL outputs
>to directly drive mixer LO's in noncritical applications.
>
>Rick Karlquist N6RK

925. Re: Wire antennas and tuned circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <3896372D.77F22998@cmcorp.com>
Source record: 63622

heildg@my-deja.com wrote:

> I am looking into building my own PCM receiver for R/C airplanes. I've
> seen several example circuit that have a LC tuned circuit at the base
> of the wire attenna.
>
> What does this circuit do to the frequency responce?
> What are the design rules for choosing values?
>
> Thanks,
>
> Dave
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

In many cases the antenna is NOT resonant on the frequencies used.
So the LCs are to match the transmitter to the existing (Sub-optimal)
antenna.

The circuit provides for a reasonable match to the tranmitter so it may
produce full power.

The rules for impedance matching are in the ARRL Radio Amateur's handbook.

there are a number of step you must take when designing a matching network.

--
Thomas C. Sefranek WA1RHP
ARRL Instructor, Technical Specialist, VE Contact.
http://www.harvardrepeater.org
http://hamradio.cmcorp.com/inventory/Inventory.html

926. Learn Communications Theory for free

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: freeseekelectronic@my-deja.com
Message-ID: <875she$ri5$1@nnrp1.deja.com>
Source record: 63623

Learn all types of communications theory for free at the Global
Internet School of Electronics and Computer Engineering.
http://www.free-seek.com/electronics.htm

Sent via Deja.com http://www.deja.com/
Before you buy.

927. Re: Manuals and Tubes for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <876d48skc1@ruby.mint.net>
Source record: 63624
Cross-posted to: free.uk.amateur-radio,rec.antiques.radio+phono,rec.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Gary Brown <gbrown@mint.net> wrote in message
news:86v3k7vvr1@ruby.mint.net...
> I have photocopies of alot of manuals for Hallicrafters, Heathkit,
> Hammarlund and others.
> Also have thousands of tubes for sale. E-Mail me with your wants to:
> gbrown@mint.net
> Thank you
> Gary
>
>

928. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Gary Peach <xcg34@dial.pipex.com>
Message-ID: <876a43$nb2$2@lure.pipex.net>
Source record: 63625
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Bob wrote ...
> But you must be very careful not to damage the pointer or bearings nor allow
> any metal pieces to be attracted by the magnets.

Good trick Bob, make sure that the printer is printing true 1:1 scale
Should you get filings in the magnet plasticene or putty is a good way to get them out.

Gary7SLL, wondering how to generate a semi circular log scale with a graphics package.

929. HF Resources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: nw7us@hfradio.removethispart.org
Message-ID: <dbzl4.210$aN6.5771@sea-read.news.verio.net>
Source record: 63626
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Howdy, folks.

New site! http://cw.hfradio.org - CW / Morse Code Resrouce center. Lots of stuff coming down the line. If you have stories, tips, links, and other things, would you share them with me, and allow me to post them on this new resource?

Also, if you are into HF, consider getting onto 10 meters! It is hot right now. Lots of DX. The Ten Ten International club is challenging Amateurs to work 2000 contacts on 10 meters, any mode, any 10 meter frequency, in the year 2000. I've posted my current 10 meter logs on the site. See if you are in there (if ya worked me!).

As usual, you are also invited to visit http://hfradio.org - a non-commercial site offering:

+ Azimuth Map / Equidistant Map Creation (choose any QTH as center, many options)

+ Propagational Resources (live, real-time reports, eAlert service (sign up for automatic email solar/geo reports, complete with Aurora index))

+ News, and DX information and reports

+ QSL Manager and Callsign Lookup center

+ Swap and Shop

+ FREE HOME PAGES THAT YOU CAN USE TO POST YOUR OWN HAM OR SWL SITE

+ Bookstore - SWL and Ham related books. Over a 1000 titles so far.

+ Plus more (Directories, etc.)

73 de NW7US, Tomas

--
: http://accessnow.com -- Brinnon, Washington : 122.93W : 47.67N :
: HOME: http://hfradio.org and http://cw.hfradio.org :
: - :
: World-Wide Communications via Amateur Radio : CW/SSB DX Hound :
: 10x56526 : FISTS 7055 : Code Warrior #60 : Propagation Student :
: :
: Member, ARRL -- Official Webmaster of the North West ARRL Site :
: NWARRL - http://hfradio.org/nwarrl/ :

930. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Nick <nick90125@hotmail.com>
Message-ID: <3896da44_4@news2.prserv.net>
Source record: 63627
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

OK, I found an earlier copy of it..

```
DECLARE SUB Mark (Value!)
'This program will print a logarithmic scale for a meter, on any laser
'printer that will print using the PCL language (PCL5 or higher)
'Nick Ray G7UFG

COMMON SHARED FSDVal, FSDAngle, Radius, MarkLength, OffsetX, OffsetY, pi

'These have been made as variables so as they can be tweaked to suit
'All values are in mm except the font pitch

FSDVal = 100 ' FSD reading
FSDAngle = 90 ' Angle of meter's FSD (normally 90deg)
Radius = 50 ' Radius of the scale (mm)
MarkLength = 5 ' Length of each graduation marking (mm)
OffsetX = 105 ' Position of the "origin" on the
OffsetY = 150 ' page to be printed (mm)
PenWidth$ = "0.2" 'line width in mm
FontPitch$ = "15" 'set font in characters per inch (cpi)
Legend$ = "Power (W)" + CHR$(3) '
LHeight = 35 'Height above the origin

Esc$ = CHR$(27)
pi = 3.14159

OPEN "lpt1:" FOR OUTPUT AS #1: WIDTH #1, 255

'reset & set up the printer to GL mode using mm as plot units
PRINT #1, Esc$ + "E";
PRINT #1, Esc$ + "&l26a0o0E";
PRINT #1, Esc$ + "*p0x0Y";
PRINT #1, Esc$ + "*c5954x8417Y";
PRINT #1, Esc$ + "*c0T";
PRINT #1, Esc$ + "%1B";
PRINT #1, "IN;SP1;WU0;PW"; PenWidth$; ";SC0,40,0,40,2;IR;PA0,0;LO11;";
PRINT #1, "SD3," + FontPitch$ + ";";

'print the arc
ax$ = LTRIM$(STR$(OffsetX - SIN(FSDAngle / 2 * pi / 180) * Radius))
ay$ = LTRIM$(STR$(OffsetY + COS(FSDAngle / 2 * pi / 180) * Radius))
PRINT #1, "PU;PA" + ax$ + "," + ay$ + ";PD;AA" + LTRIM$(STR$(OffsetX)) + ","
+ LTRIM$(STR$(OffsetY)) + ",-" + LTRIM$(STR$(FSDAngle)) + ",0.5;";
PRINT #1, "PU;PA" + LTRIM$(STR$(OffsetX)) + "," + LTRIM$(STR$(OffsetY +
Radius)) + ";";
```

```
'Print the graduations we want. Either use a for/next loop like below, or
'just enter them. Use "Mark(value)". Here I've used the for/next to mark
'every 20, and I've also added 5 & 10 at the bottom of the scale.
FOR N = 0 TO FSDVal STEP 20
Mark (N)
NEXT
Mark (5)
Mark (10)

'put the legend on.
PRINT #1, "PU;PA" + LTRIM$(STR$(OffsetX)) + "," + LTRIM$(STR$(OffsetY +
LHeight)) + ";";
PRINT #1, "LO5;LB" + Legend$;

'Finally, reset the printer & eject the page
PRINT #1, Esc$ + "%1A" + Esc$ + "E";
CLOSE

SUB Mark (Value)
A = (FSDAngle / FSDVal * SQR(FSDVal) * SQR(Value) - FSDAngle / 2) * pi /
180
X1 = SIN(A) * (Radius - MarkLength / 2) + OffsetX
Y1 = COS(A) * (Radius - MarkLength / 2) + OffsetY
X2 = SIN(A) * (Radius + MarkLength / 2) + OffsetX
Y2 = COS(A) * (Radius + MarkLength / 2) + OffsetY
Pr$ = "PU" + LTRIM$(STR$(X1)) + "," + LTRIM$(STR$(Y1)) + ";"
Pr$ = Pr$ + "PD" + LTRIM$(STR$(X2)) + "," + LTRIM$(STR$(Y2)) + ";"
PRINT #1, Pr$;
PRINT #1, "LB" + LTRIM$(STR$(Value)) + CHR$(3);
END SUB
```

931. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <19938-3896D92D-9@storefull-126.bryant.webtv.net>
Source record: 63628

I WONDER HOW A CAR BATTERY FLOATING ON THE LINE WITH ISOLATING DIODES
WOULD WORK.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

932. Re: Stacking Pwr Supplies?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <19938-3896DA2E-10@storefull-126.bryant.webtv.net>
Source record: 63629

WHY DON'T YOU BACK IT OFF TO ABOUT 9 VOLTS BOB, THAT SHOULD MAKE IT LAST FOREVER. <grin>

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

933. 40m & 80m CRYSTALS for trade!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <4SBl4.81$qw5.7126@dfw-service2.ext.raytheon.com>
Source record: 63630
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.equipment

I have some 40m and 80m crystals for trade at...

http://www.qsl.net/k5dh/swap.html

73,
Dean / K5DH

934. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <mcud9sghkr2ogfhmco0af0vtsqduc0t078@4ax.com>
Source record: 63631

On 31 Jan 2000 19:04:14 -0800, rick@vax.area.com (Richard Karlquist) wrote:

>When I was talking about the transformer not passing a square wave,
>I was referring to phase shift problems (or you could describe it
>as different group delay for different harmonics). This is a problem
>even at low levels where the transformer is linear.
>
>I can't imagine why you would want to saturate the transformer in
>a mixer.

I wouldn't *want* to saturate the transformer, Rick. I'm merely pointing out that once it does saturate, wouldn't the diodes already be switched in to conduction?

Let me restate the question: Would the group delay effects of a square wave signal propagating through a transformer actually cause a diode to drop out of conduction when it is actually expected to stay on? Conversely, would group delay effects through the transformer actually cause the diodes to stay in conduction when they're supposed to be switched off?

I can envision a situation where the hysteresis effects of a transformer might cause a phase shift of the LO once it gets to the mixer diodes. And I can envision that using a square wave on the LO port might result in a different phase shift. But I can't see how it would necessarily be a "bad" thing if you consistently drove the input with a square wave.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

935. WTB: 15-pin Cinch-Jones Connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Marty Tippin KI0LO <martyt@pobox.com>
Message-ID: <8773gj$n59$1@nnrp1.deja.com>
Source record: 63632

I need a couple 15-pin Cinch-Jones female cable-end connectors for the
power supply project I'm working on (to run an Elmac AF-67).

Any leads would be appreciated. Mouser won't have them for months.

73,

-Marty KI0LO
martyt@pobox.com

Sent via Deja.com http://www.deja.com/
Before you buy.

936. GE Phoenix SX Programming

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <3897077d.13792748@news.thegrid.net>
Source record: 63633
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.digital.misc,rec.radio.amateur.boatanchors,alt.ham-radio.vhf-uhf,alt.ham-radio.packet,alt.ham-radio.marketplace

Anyone know who might program these radios? Web Addresses and anywhere
in California would be great.

73 de kf6foz
The "kf6foz BBS"
Redding, CA.
530-229-0896
http://www.qsl.net/kf6foz/
The BBS is back up... Ignore what the webpage says...

937. Drake R-4C xtal filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38962f81.26653981@news.online.no>
Source record: 63634

Hi

what sort of xtal filter is used on 5645kHz? Some 'rumours' mentioned
it was only a very simple 2-xtal lattice filter

is it difficult to replace it by a 5-6 xtal a ladder filter, impedance
is supposed to be 1000 ohm, and I need only 4kHz BW

73 jan-martin
LA8AK

938. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <$Ilw8EA9Xsl4EwUq@ifwtech.demon.co.uk>
Source record: 63635
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Gary Peach wrote:
>
>Bob wrote ...
>> But you must be very careful not to damage the pointer or bearings nor
>allow
>> any metal pieces to be attracted by the magnets.
>
>Good trick Bob, make sure that the printer is printing true 1:1 scale
>Should you get filings in the magnet plasticene or putty is a good way to
>get them out.
>
>Gary7SLL, wondering how to generate a semi circular log scale with a
>graphics package.
>
>
AutoSketch will do it. If you calculate the angles involved - measured
from a baseline, and centred on the pivot point - you can make
AutoSketch draw a scale mark at any specified angle using keyboard
input. It's tedious but very precise.

Linear scales are very much easier - it will draw all the lines in a
single operation (once you remember how).

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

939. Re: PCB footprint for AD9854 for Autotrax?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38973E90.5DE@ixpres.com>
Source record: 63636

Richard OM,
I made my own pattern manually. You can do this just by sitting down and making a sketch of the pin placement dimensions, and then use your favorite layout program to make a part macro. I am aware of no ready-made PC pattern available on any of the free/share ware PC layout programs that I use. But they must in general exist somewhere, since it is a standard 80-pin SMT package pinout. In the time it may take you to find a source, you could lay out your own pattern and save it.
The AD9854 is a great looking part. Programmable CW keying rise and fall times, even. Ham radio homebrewing is getting easier and easier every day. Ain't it great?

73 and GL,

Don, W6JL

Richard Hosking wrote:

>
> Gday all
> Anyone know where I can find a readydone PCB pattern for the AD9854
> from Analog Devices (or maybe even a board pattern?)
> I am intending to use the device in a I/Q direct conversion receiver
> board.
> Thanks
>
> Richard

--
ï¿½ï¿½à¡±ï¿½

940. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <389744A0.B6084409@agilent.com>
Source record: 63637

I'm aware that there are those who would suggest you drive the LO port with a square wave current source. It seems to me that there is no danger of saturating any cores that way, any more than if you drive it with the same current level some other way.

Seems like it would be an easy enough test to do. You'd want to know what things you wanted to characterize: IP3, P1db, etc. Surely someone out there has done tests like this before. Is there anything definitive in Steven Maas's book on DBDM's? (I think that's the guy who has written books and magazine articles on the subject.)

I'd love to be able to ask my uncle his thoughts on it; he got a patent for at least one version of a diode DBM. Unfortunately, he's beyond being able to discuss things like this.

Cheers,
Tom

Jake Brodsky wrote:

> I can envision a situation where the hysteresis effects of a
> transformer might cause a phase shift of the LO once it gets to the
> mixer diodes. And I can envision that using a square wave on the LO
> port might result in a different phase shift. But I can't see how it
> would necessarily be a "bad" thing if you consistently drove the input
> with a square wave.

941. Want 40m FT-243 XTAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Doug Snowden <dsnowden@ncdc.noaa.gov>
Message-ID: <38974430.2F90E948@ncdc.noaa.gov>
Source record: 63638

I need a FT243 xtal for 40m and 80 cw. Frequency not too important. I'll use it to test a transmitter until I have built a VFO for it. Active xtal only please.

Doug N4IJ
dsnowden@ncdc.noaa.gov

942. Pot taper article in CQ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: n5kat@my-deja.com
Message-ID: <877pok$906$1@nnrp1.deja.com>
Source record: 63639

Just after I gave away my old CQs, I need the author and date of the article published in 1999 CQ on adjusting potentiomenter taper with external resistors.

Appreciate it if anyone could help with this info so I can order the back issue. Or I'll buy yours ;->

Thanks and 73,
Joe N5KAT

Sent via Deja.com http://www.deja.com/
Before you buy.

943. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38974FE8.754B@pop.removethistomailme.net>
Source record: 63640

Tom Bruhns wrote:
>
> I'm aware that there are those who would suggest you drive the LO port
> with a square wave current source. It seems to me that there is no
> danger of saturating any cores that way, any more than if you drive it
> with the same current level some other way.
>
> Seems like it would be an easy enough test to do. You'd want to know
> what things you wanted to characterize: IP3, P1db, etc. Surely someone
> out there has done tests like this before. Is there anything definitive
> in Steven Maas's book on DBDM's? (I think that's the guy who has
> written books and magazine articles on the subject.)

For what it's worth, the FAQ in the Mini-Circuits designer's guide
claims it's perfectly kosher to drive their DBMs with a square wave.
Don't have the exact quote handy, but it's one of their FAQs.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam
---

944. Re: Max 232 IC's Source Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Stan Sanderson <dss@ican.net>
Message-ID: <38975F18.93F24C5E@ican.net>
Source record: 63641

Many thanks to all of you that took the time to give me some
leads. 73 Stan VA3DS

Don Winn wrote:

> Digikey has several versions of the MAX232.
>
> http://www.digikey.com
>
> Don AF4Z
>
> In article <38948894.24DFDA0C@ican.net>, dss@ican.net says...
> >
> >Hi, Will someone direct me to a source for Max232 IC's
> >please. 73 Stan
> >

945. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Gary Peach <xcg34@dial.pipex.com>
Message-ID: <877qt6$dp4$2@lure.pipex.net>
Source record: 63642
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Ian White, G3SEK wrote ...
> Gary Peach wrote:
> >Bob wrote ...
> >> ...be very careful not to damage the pointer or bearings ...
> >Good trick Bob, make sure that the printer is printing true 1:1 scale
> >Should you get filings in the magnet plasticene or putty is a good way
to
> >get them out.
> >
> >Gary7SLL, wondering how to generate a semi circular log scale with a
> >graphics package.
> >
> >
> AutoSketch will do it. If you calculate the angles involved - measured
> from a baseline, and centred on the pivot point - you can make
> AutoSketch draw a scale mark at any specified angle using keyboard
> input. It's tedious but very precise.

I'd like to instal Auto CAD 13, but at that price no way.
I think it has a function for doing log type work directly.

Presently I only have graphics packages.

If a CAD package can Auto draw linear scales then it is not very hard to get it to do Log or any other law. I have written BBC Basic programs to do it on a nine pin Dot matrix, but the output is really no up to scratch.
Ideally a C program for Windows that would pring scales of various sorts woul dbe a nice application for Hams.
I suppose I could calculate a function with Excel and then print a scaled graph of the function and cut that out.

> Linear scales are very much easier - it will draw all the lines in a
> single operation (once you remember how).

Be nice if it put on the numbers too :)

Thanks Ian, little tools like this can give a professional touch to home construction projects. A laser printer will print on transparencies, an entire front panel could be printed in mirror and the stuck onto the project before the components are mounted on the panel once stuck firmly down then trim with a sharp knife. Because the print is under the plastic it is protected from wear and sweat bringing it off. Also any Logos etc can be put on nicely.
Got any easy Ideas for mechanical methods to convert linear motion into Log, Tan, etc. motion?

Gary7SLL

946. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: Gary Peach <xcg34@dial.pipex.com>
Message-ID: <877qt7$dp4$3@lure.pipex.net>
Source record: 63643
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Nick wrote ...
> OK, I found an earlier copy of it..
>... on any laser
> 'printer that will print using the PCL language (PCL5 or higher)

Have laser printer don't know if it'll handle PCL.

Can the scale be printed in mirror for printing on the underside of transparency films?

Gary7SLL

947. Re: Wire antennas and tuned circuits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-01 00:00:00 UTC
From: dm <dmandjos@olypen.com>
Message-ID: <KuKl4.3573$d61.106096@news6.giganews.com>
Source record: 63644

I built three(3) R/C xmtrs, and four (4) receivers, which I used happily fly , until I got TOTALLY sick of the jerks that fly R/C toys!!!

BUT, usually the antenna you trail from your plane, or if you are "cool", you bury inside, is usually only about 30 to 35 INCHES long. That is a long way from resonant in either the 6 Meter ham band, or the 74/76 MC "R/C" band, Sooo, you need to be able to match that wire to the input of the rcvr. That means you are trying to make a 30 to 35 inch wire, look like from 58 inches on the 6m band to 37 inches at the channel 60, I believe. Anyway the top Red Steamer channel! AND that is the purpose of that tuned circuit. for the R/C channels, the matching effect is not much, thus the "Q" of the circuit is pretty low, the tuning of that circuit is not too critical. For the 6M band, it is pretty high "Q", and when I tuned my receivers' inputs, it was a slow, cautious affair! But it worked just great. I found it very handy to have a spare receiver, for use while building, setting servos, etc. I also used that rcvr with a stervo, to test my operating range, here at home, with the xmtr antenna fully compressed, and pointed at the rcvr/servo. This way, I knew that a TX/RX pair better run that servo (Flag on the servo shaft) from about 400 feet! Only crash I ever had was from a cold solder joint in the TX..it just didn't put out the 0.6 to 1.0 watts, and so the range was too small, and my twin engined jewel went.....ker-plop! R/C a fine hobby, IF AND ONLY IF, you can fly away from a CLUB. R/C Club gotta be the biggest collection of the smallest minds this here HAM ever saw!!! GL with PCM!! 73 "DM"

948. Re: HF Resources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: The NeXus <nexus@datasync.com>
Message-ID: <877tmv$ac6$1@news.datasync.com>
Source record: 63553
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Thanks Tom, its a nice looking addition to www.hfradio.org.
Jimmy, KB5FSV, http://www.datasync.com/nexus/hamradio

In rec.radio.amateur.equipment Tomas - NW7US <nw7us@hfradio.removethispart.org> wrote:
: Howdy, folks.

: New site! http://cw.hfradio.org - CW / Morse Code Resrouce center. Lots of stuff coming down the line. If you have stories, tips, links, and other things, would you share them with me, and allow me to post them on this new resource?

: Also, if you are into HF, consider getting onto 10 meters! It is hot right now. Lots of DX. The Ten Ten International club is challenging Amateurs to work 2000 contacts on 10 meters, any mode, any 10 meter frequency, in the year 2000. I've posted my current 10 meter logs on the site. See if you are in there (if ya worked me!).

: As usual, you are also invited to visit http://hfradio.org - a non-commercial site offering:

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: + News, and DX information and reports

: + QSL Manager and Callsign Lookup center

: + Swap and Shop

: + FREE HOME PAGES THAT YOU CAN USE TO POST YOUR OWN HAM OR SWL SITE

: + Bookstore - SWL and Ham related books. Over a 1000 titles so far.

: + Plus more (Directories, etc.)

: 73 de NW7US, Tomas

: --
: : http://accessnow.com -- Brinnon, Washington : 122.93W : 47.67N :
: : HOME: http://hfradio.org and http://cw.hfradio.org :
: : - :
: : World-Wide Communications via Amateur Radio : CW/SSB DX Hound :
: : 10x56526 : FISTS 7055 : Code Warrior #60 : Propagation Student :
: : :
: : Member, ARRL -- Official Webmaster of the North West ARRL Site :
: : NWARRL - http://hfradio.org/nwarrl/ :

--
John 3:16
For God so loved the world that he gave his
only begotten Son that whoever believes in
him shall not perish but have eternal life.
I believe, do you? Jimmy, nexus@ametro.net

949. Re: Want 40m FT-243 XTAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38977283.109356263@news.online.no>
Source record: 63554

On Tue, 01 Feb 2000 15:38:08 -0500, Doug Snowden
<dsnowden@ncdc.noaa.gov> wrote:

>I need a FT243 xtal for 40m and 80 cw. Frequency not too important. I'll
>use it to test a transmitter until I have built a VFO for it. Active
>xtal only please.
>
>Doug N4IJ
>dsnowden@ncdc.noaa.gov
>
and it must be FT243, not HC6/U or 10XJ ? If it is just for temporary
tests HC-6/U, HC18/HC25/HC49/HC50 xtals might be soldered below of the
FT243/241 xtal socket

73 jan-martin LA8AK

950. FS: 5.1 V FIL XFMR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <9iLl4.1781$Vy.169985@bgtnsc05-news.ops.worldnet.att.net>
Source record: 63555

Have one 5.1v @ 26A fil xfmr. $20 + shipping from 65714, MO: Joe, WS0E

951. List of the rec.radio newsgroups

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: jeffreyh@Hawaii.Edu
Message-ID: <8782od$8fr$1@news.hawaii.edu>
Source record: 63556
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

```
Archive-name: radio/personal-brief-introduction

In an effort help ensure a poster's article reaches the appropriate
audience, below is a list of the rec.radio newsgroups. In most cases,
a group's name will explain its purpose. Cross-posting should rarely
be necessary.

rec.radio.broadcasting (devoted to the broadcast industry; moderated)
rec.radio.cb
rec.radio.info (periodic informational bulletins; moderated)
rec.radio.scanner
rec.radio.shortwave
rec.radio.swap (for buying, selling, and trading; not a discussion group)

rec.radio.amateur.antenna
rec.radio.amateur.boatanchors (tube-type communications equipment)
rec.radio.amateur.digital.misc (packet, pactor and other digital modes)
rec.radio.amateur.dx (long-distance amateur communications)
rec.radio.amateur.equipment (questions, comments regarding commercially-
built amateur gear; not for buying/selling)
rec.radio.amateur.homebrew (devoted to home-building ham gear)
rec.radio.amateur.policy (issues include code, restructuring, local
restrictions in conflict with FCC R&R)
rec.radio.amateur.space (satellites, meteor scatter, EME)
rec.radio.amateur.misc (any topic not covered in the above groups)

(At least two other English language radio hierarchies exist, prefixed
with "uk" (United Kingdom), and "aus" (Australia), in place of "rec.")

Again, cross-posting should rarely be necessary. Many times, a long-
running thread results from a single cross-posted article, and its
content drifts further and further away from being "on-topic" in the
various NGs which receive each and every followup.

For more detailed information, see "Guide to the Rec.radio Newsgroups"
posted on the 15th of each month.

Jeffrey Herman, KH6O
```

952. Re: Data transmission q

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3897C87A.6E3A22BA@home.com>
Source record: 63557

In my real job I can call up a consultant and say "Run some 100BaseT from that wall to that wall", but this is what I supposedly do for fun.

The terminal impedance can be figured as a CMOS counter input. The pulse width is specified between 125 and 500 nanoseconds, but it has really rounded off edges (even with a good TEK scope probe). I have no info as to the source impedance (not given in the mfr's data sheet). The cable I have at hand is Belden 8641 (shielded with a separate ground return and a line for powering the counter). Being a miser I am happier to use something at hand but I am open to expert advise since Allied Avnet is only a few clicks away.

While I have been running the pulse through a pair of flip flops to clean it up and stretch it out. The existing (pre-ff) output is not really pretty, but perhaps it is better to do without the clean up (or conditioning) ff's, since the nice square edges off the ff's are probably prone to problems.

I am all ears.

Jack
Bob wrote:

> It depends. To do this properly, you need to make some decisions.
>
> First, what is the source impedance and rise time of the pulses?
> Second, what is the slowest rise time you can accept?
> Third, what is the load impedance (complex impedance preferred)?
> And finally, what is the capacitance of the shielded cable?
>
> You have a voltage divider here that is frequency dependent. The
> capacitance of the cable is put in parallel with the load. So you have a
> low pass filter, and the cutoff frequency will determine the degradation of
> the pulse rise and fall times.
>
> All this presumes that the cable length is a very small fraction of a wave
> length at the highest frequency component of concern. If this is not the
> case, then tell us the cable length and velocity constant.
>
> So it's not that simple. Give us some of the parameters above and we can
> help figure out the pulse degradation.
>
> 73, Bob K6DDX

953. Quadrature detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3897CE34.7B30365C@home.com>
Source record: 63558

One last digital question.

I mocked up a quadrature detector to read the first 90 degrees of a sine wave. Easy, I thought, multiply the input frequency by 16 (using a 4046 as a frequency multiplier) and, with a CMOS BCD counter, just "NOT BUFFER" (tying together the inputs of 2 NAND's) the 2^2 and 2^3 outputs which are "0" for the first four counts), NAND these two outputs and look at the result.

Everything is clean, except a pesky little spike -- faulty wiring off the bread board? Opinions please. The original idea is from an old issue of EDN for a 0 to 90 deg quad detector.

Jack

954. Re: Want to build VHF/UHF duplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: neep.neep@acme.com
Message-ID: <n08f9sst9mslomfkd64qs9934lq6cq68dr@4ax.com>
Source record: 63559

QST had an article several years ago. It was a capacitor input high
pass filter and a inductor input low pass filter with input terminals
connected.

Cutoff frequencies were well above/below the target frequencies.

73..Jim N2VNO

On 31 Jan 2000 12:11:10 GMT, "L.M.Preece" <mda03@keele.ac.uk> wrote:

>Hello.
>
>I want to build a VHF/UHF duplexer to combine the 2m and 70cms output of my
>radio to my dual-band colinear. Have searched the web but can't find any
>info on various sites. Pointers or any help much appreciated.
>
>73s.
>
>Leigh....
>M1CZK

955. Dual zero bias Schottky diodes needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Peter Bolch <nc-bolchpe@netcologne.de>
Message-ID: <878g3c$2io$1@news.netcologne.de>
Source record: 63560

Hi,

I need some (10 or so) single and dual zero bias SMD Schottky detector diodes. There are
some suitable types made by Alpha Industries but it is nearly impossible to get them here in Germany in small quantities. And all the internationally operating vendors I know (like Newark) have a minimum order of several 100 $. Any ideas?

Peter

956. Re: F.C.C. citizen band enforcement question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38981705.E6DBF987@mindspring.com>
Source record: 63561

You are quite right the more complaints the better. It is easy to ignore one or two complaints, but when a couple dozen complain ("CC-"ing your Congressman helps to get the ball rolling!), things sometimes get done. Still, the process takes a long time. In the Phoenix area, there are two or three high-profile (meaning that they get reported in the ham press, and even sometimes in the local newspapers) enforcement actions each year against CB operators. Last year they got one who was retransmitting Channel 19 on a 2M repeater, and vice-versa. He was so hostile and abusive to the FCC agents they hit him with a $6K NAL. Then he kept it up, and apparently a neighbor, sick of rampant TVI, threw a molotov cocktail at his tower. In the ensuing fire and commotion, he (the CBer) got arrested for disorderly conduct, another complainant-neighbor who is a ham notified a contact at the FCC office, and he ended up having his CB, illegal amp, dual-band FM mobile and brick-amp, and an illegally modified AOR 8000 confiscated. Very satidfying, even if it took over a year. In another similar case, the County Sheriff's office is after someone who is coming on Sheriff's frequencies and threatening the Sheriff (who is a horse's ass, but that is beside the point here). This has been going on over two years with this individual, and there have been several other instances just like it in the city of Mesa, Arizona where teenagers were caught using and jamming police repeaters. The moral is that it takes a long time to get conclusive action, given both the budgetary and logistical problems of catching these guys.

BTW, while making death threats using radio involves the FBI, your chances of getting the FBI actually interested in a specific case are slim and slimmer. I don't say none, since anything can happen, but just filing a complaint with them isn't likely to bring any sort of action at all. They are very busy. They probably will tell you to call your local police, and get a restraining order of some kind oif the threats are directed at you. Only if you can provide tapes, DF data, TC fingerprints, and dates/times/names/places, and evidence that the person transmitting is likely to immediately act on the threats will you get any kind of action, from the police or FBI. Even then, the police can't make an arrest based solely on a verbal threat. There has to be documentary evidence of past violence, or else the current threats must be accompanied by actual menacing: i.e., the offender must be holding a pipe or a knife or a gun in his hand as he says something like "I am going to beat you/kill you pretty soon." Pretty hard to show that over the radio.

de Will KD7BFX

Matt Erickson wrote:
>

> The more complaints filed, from different sources on a common violator,
> will get a better response.
> If the violator is heard making death threats against anyone, the FBI
> will be very interested.
>
> gudmundur wrote:
>
> > I don't want to open a hot debate, but my question is this.
> > Has anyone sent detailed or documented occurrances of continuing
> > violations to a field office, and if so, did they care? Were you
> > contacted? Was the violation or occurances resolved? I am in
> > the process of gathering audio documentation of a violator, and
> > wonder if I am just wasting my time. All comments will be greatly
> > appeciated and thought about before continuing my effort.
> >
> > TNX og 73
> > Gummi

957. telephone radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: none5365@my-deja.com
Message-ID: <8798m8$9mo$1@nnrp1.deja.com>
Source record: 63562

Has anyone ever tried sending audio down a
telephone line.

Sent via Deja.com http://www.deja.com/
Before you buy.

958. Re: Radios and Computer Question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38981A0E.68534E96@mindspring.com>
Source record: 63563

Adam & Tim,

It is illegal to use CB radios to transmit computer data, or anything other than AM-modulated voice signals. If you keep the transmitted output power down to 100 milliwatts or less, which is plenty of RF power to accomplish the short range task you have in mind, you may be able to use a pair of 49MHz walkie talkies, or FRS walkie talkies, or else you can get a pair of small FM wireless microphones along with a pair of FM receivers tuned to an empty spot on the dial (you can get all of these at Radio Shack and other places).

You also need at very least a sound card and data controller/modulation program for each computer. You can find shareware and freeware programs at www.qrz.com or www.ac6v.com. Another thing to try is using a pair of used terminal node controllers (TNCs) with the radios and computers. You can find these used at hamfests and on the internet.

Whatever apporach you take, this is a fairly complex project for a beginner. I don't mean to discourage you, just letting you know. you might look up your local ham radio club to find someone locally who can help you with the project, since there is a lot of wiring, configuring, tweaking, debugging, and even possibly some soldering involved. Maybe your science teacher can help you find ham operators in your area, you should ask him or her. At very least, go to your public library at look up books on ham radio and data transmission. The ARRL Handbook for Radio Amateurs and Your Packet Companion are two good titles to start with, though look for anoything that deals with radio-data communications. Best of luck to you!

de Will KD7BFX

KilroogEye wrote:
>
> Dear Radio People,
>
> My friend and I are thinking about doing a science project
> that would require two computers to "talk" to eachother
> using CB radios...
>
> We don't want to transmit pictures or anything - - Just
> simple text messeges. I need to know if there is a program
> out there that turns letters typed on the computer to some
> kind of signal that a computer can send and receive using
> the CB radio as the carrier.
>
> Please write back to:

>
> AdamRoss@aol.com
>
> Thank you for your time!
>
> Adam Ross & Tim Donovan

959. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Will White <kd7bfx@mindspring.com>
Message-ID: <38981BBB.997D7CBD@mindspring.com>
Source record: 63564

Tim,

The Ramsey kits are interesting, but for the money you would be much better of getting a new or used 2M mobile rig. Kenwood, Yaesu, and Icom each sell a model that retails for about $200 new. Alinco and ADI have 2M rigs for about $175 new. For your money you will get a full 50 watts out, a digital display, memories, PL/CTCSS encode-decode, and a DTMF mic. You also get an assembled radio with a full warantee that is ready to use, just connect a 12V supply and antenna and away you go. Kit building is fun, but I think, as a new ham, you will have more fun, and be better off, buying an assembled rig. You get more for your money, and avoid construction problems. If you have the itch to build something, by one of Ramsey or Ten-Tec's accesory kits, like a wattmeter, or even the 2M-to-6M transverter. That way, if you get into trouble building the kit, you can hop on a repeater and get help from another ham, which you couldn't do while building one of the Ramsey radios (at least if you don't have another rig). Best of luck to you!

de Will KD7BFX

Tim Seguin wrote:
>
> I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> good deal or a waste of money?

960. 2m transceiver kit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Ralph Blach <rcblach@raleigh.ibm.com>
Message-ID: <389836F6.160128E3@raleigh.ibm.com>
Source record: 63565

Is there a 2meter trans/receiver kit available from anyone?

Please append responces to the forum?

Thanks

Chip

961. Re: Want to build VHF/UHF duplexer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Richard Wilkes <rwilkes@gte.net>
Message-ID: <eFWl4.96$kP3.5135@dfiatx1-snr1.gtei.net>
Source record: 63566

Article is in QST, October, 1991.

It is basically a high pass and low pass pie filter.

"L.M.Preece" <mda03@keele.ac.uk> wrote in message
news:873u4u$20r$4@cfs2.kis.keele.ac.uk...
> Hello.
>
> I want to build a VHF/UHF duplexer to combine the 2m and 70cms output of
my
> radio to my dual-band colinear. Have searched the web but can't find any
> info on various sites. Pointers or any help much appreciated.
>
> 73s.
>
> Leigh....
> M1CZK
> --
> + + + + + Leigh Preece + + Keele University, Staffordshire, UK + + + + +
> + + Email - Internet: leigh@media.keele.ac.uk + +
> .... .- -- -.-. .- .-.. .-.. -- .---- -.-. --.. -.-

962. Re: telephone radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: ccox@chopped-ham-filtre.uhc.com.invalid
Message-ID: <879d84nbm1@pike.uhc.com>
Source record: 63567

none5365@my-deja.com wrote:
: Has anyone ever tried sending audio down a
: telephone line.

Sure - US Worst does it all the time ;-)

: Sent via Deja.com http://www.deja.com/
: Before you buy.

--
Chris Cox, N0UK/G4JEC NIC Handle: CC345
UnitedHealthGroup, Inc., MN10-W116, UNIX Services & Consulting
6300 Olson Memorial Highway, Golden Valley, MN 55427
email: ccox@uhc.com (work) chrisc@chris.org (home)

LINUX - aka Microsoft Windows/NT - The Final Service Pack
Remember: The next millennium starts on 1 January 2001 NOT 2000

963. Re: telephone radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <38983C25.784B6726@concentric.net>
Source record: 63568

In the 2-way radio business, as well as broadcast radio, telephone lines have been used for both audio and control tones and switching voltages to control radios from a distant point.
Telephone audio is not hi-fi, but neither is the audio we use for radio SSB/FM bandwidths either.
You can still buy inexpensive remote control units that use DC voltage to operate the PTT relay as well as decent audio for both transmit and receive,with only the 2 wires of the phone line, and it is not terribly hard to build one yourself.
Biggest trouble is that nowadays a "dedicated line" of ANY length provided by the telco will cost a fortune. Thus the use now of remote controllers using tones for TX/RX control so that the desired remote radio can be just "dialed up" like a telephone.
There have been articles in 73 and QST detailing such projects. You can do a search and find such things, hopefully.
Jim W5AOX

none5365@my-deja.com wrote:

> Has anyone ever tried sending audio down a
> telephone line.
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

964. Re: 2m transceiver kit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Jim <jdport@concentric.net>
Message-ID: <38983CD4.BADE7D85@concentric.net>
Source record: 63569

Ten-Tec and Ramsey Electronics sell such kits:
http://www.ramseyelectronics.com/
http://www.tentec.com/
Jim W5AOX

Ralph Blach wrote:

> Is there a 2meter trans/receiver kit available from anyone?
>
> Please append responces to the forum?
>
> Thanks
>
> Chip

965. Re: Quadrature detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3898698E.E6E3D9BA@home.com>
Source record: 63570

I guess the problem relates to the slight propagation delay.. I just need a simple deglitcher idea.

JW wrote:

> One last digital question.
>
> I mocked up a quadrature detector to read the first 90 degrees of a sine
> wave. Easy, I thought, multiply the input frequency by 16 (using a 4046
> as a frequency multiplier) and, with a CMOS BCD counter, just "NOT
> BUFFER" (tying together the inputs of 2 NAND's) the 2^2 and 2^3 outputs
> which are "0" for the first four counts), NAND these two outputs and
> look at the result.
>
> Everything is clean, except a pesky little spike -- faulty wiring off
> the bread board? Opinions please. The original idea is from an old
> issue of EDN for a 0 to 90 deg quad detector.
>
> Jack

966. Re: Quadrature detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <3898416F.D469BEFD@sympatico.ca>
Source record: 63571

JW wrote:
>
> I guess the problem relates to the slight propagation delay.. I just need a
> simple deglitcher idea.

What kind of counter are you using? If you're using a ripple counter
you're
going to have to latch the outputs to get rid of the glitch.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

967. FS-23 Sonar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: jrobmills@aol.comremove
Message-ID: <20000202120403.27492.00001186@ng-fl1.aol.com>
Source record: 63572

Yeah, I know it's a cb but it has a very large cabinet (aprox 11-1/2 W X 11-1/2 d X 5 1/2 H) that has that Collins look. That cabinet is in excellent shape and with a new front (blank) panel you could build anything you want in it. I guess it could be rebuilt and sold to a collector but the power transformer is out and I don't know what else, so would not recommend this. If you need a neat cabinet for a project or happen to have access to a not so nice looking FS-23 that's otherwise re buildable this might interest you. If interested e-mail me.

PS, I also have a steel hinged top cabinet (less front panel) probably from the 50's. It's in the attic put am guessing it to be about 11 -12 inches square. If interested I'll crawl up there (woe is me) and get it down and give you more specific measurements.

Rob Mills ~~~

968. Re: circuit board layout software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <s9gtehpner218@corp.supernews.com>
Source record: 63573

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Check out :

http://www.cadsoftusa.com/

Their "Eagle" is availabel in a freeware version that would be quite useful
for most ham applications ... there is a limit on the number of layers,
etc.,
but otherwise, it's fully functional. (not too many hams make multi-layer
PCBs, so the limitations are essentially irrelevant, I believe.)

Not affiliated with them in any way, just a satisfied customer with their
"Professional" version ...

BTW ... there are versions for both Windows and Linux ...

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- --
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- --
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

"Dave Martindale" <davem@cs.ubc.ca> wrote in message
news:874v31$9kr$1@newcastle.cs.ubc.ca...
> "Richard Wilkes" <rwilkes@gte.net> writes:
> >It is there. You will find it under Demos.
> >It is not useful because it is a demo version and will not allow files to
be
> >saved.
>
> I saw that, and as you point out it's useless for real work. This is
> quite different from CircuitMaker, where in addition to the demo version
> there is also a student version that's fully usable.
>

> Dave
-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBOJh1xpe+N6+q84HiEQIiTACfSmw8yQfnX6PECIfgLbDtNqFXvu4AnRCs
sREHziyViVAwE6qSmOppl6Z4
=g8c6
-----END PGP SIGNATURE-----

969. Re: Determining SBL-1 Mixer LO Power level

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: William Janssen <billj@calweb.com>
Message-ID: <38987631.1738FD30@calweb.com>
Source record: 63574

Its been a long time since I thought about this problem but
as I remember it, a saturating core causes a pulsed output.
Transformers only have an output when the flux in the core is
changing. When the core saturates the output drops to zero.

Bill K7NOM

Jake Brodsky wrote:
>
> On 31 Jan 2000 19:04:14 -0800, rick@vax.area.com (Richard Karlquist)
> wrote:
>
> >When I was talking about the transformer not passing a square wave,
> >I was referring to phase shift problems (or you could describe it
> >as different group delay for different harmonics). This is a problem
> >even at low levels where the transformer is linear.
> >
> >I can't imagine why you would want to saturate the transformer in
> >a mixer.
>
> I wouldn't *want* to saturate the transformer, Rick. I'm merely
> pointing out that once it does saturate, wouldn't the diodes already
> be switched in to conduction?
>
> Let me restate the question: Would the group delay effects of a square
> wave signal propagating through a transformer actually cause a diode
> to drop out of conduction when it is actually expected to stay on?
> Conversely, would group delay effects through the transformer actually
> cause the diodes to stay in conduction when they're supposed to be
> switched off?
>
> I can envision a situation where the hysteresis effects of a
> transformer might cause a phase shift of the LO once it gets to the
> mixer diodes. And I can envision that using a square wave on the LO
> port might result in a different phase shift. But I can't see how it
> would necessarily be a "bad" thing if you consistently drove the input
> with a square wave.
>
> Jake Brodsky, AB3A mailto:frussle@erols.com
> "Beware of the massive impossible!"

970. FS Older/Newer Test Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: paul332@iwvisp.com
Message-ID: <s9h1rm92er230@corp.supernews.com>
Source record: 63575

Send e-mail for list.

971. Re: Quadrature detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3898C4A8.73444585@home.com>
Source record: 63576

I was using a 1/10 and a 1/16 counter - the glitch is enough to trigger one of the NAND's. I did pull out a Don Lancaster TTL book with a section on glitch removers (no section in his CMOS cookbook) - your right, a latch with a d-ff should work.

Merci bien, a bientot

Jack

Laura Halliday wrote:

> JW wrote:
> >
> > I guess the problem relates to the slight propagation delay.. I just need a
> > simple deglitcher idea.
>
> What kind of counter are you using? If you're using a ripple counter
> you're
> going to have to latch the outputs to get rid of the glitch.
> --
> Laura Halliday VA3LDH "Laisse le vent tout emporter..."
> Grid: FN03gs - Foly/Viennet

972. 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-02 00:00:00 UTC
From: Martin Rask <martin.rask@mailbox.swipnet.se>
Message-ID: <_q2m4.4347$jg4.6910@nntpserver.swip.net>
Source record: 63577

Hello
I would like to get information on how to build a 2m tube amplifier with 2X
4CX250B or some other tubes
The amplifier should produce more than 500W on SSB
best regards Martin SM7VHS

973. Re: FS-23 Sonar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: jrobmills@aol.comremove
Message-ID: <20000203161244.02475.00001217@ng-fc1.aol.com>
Source record: 63445

Sorry, the FS-23 is gone but the hinged top cabinet is still available.

Rob Mills ~~~

974. Re: 2m transceiver kit.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: Dave Heil <K8MN@cats-net.com>
Message-ID: <3899ED89.A770ADCB@cats-net.com>
Source record: 63446

Ralph Blach wrote:
>
> Is there a 2meter trans/receiver kit available from anyone?
>
> Please append responces to the forum?
>
> Thanks
>
> Chip

Yes, from Ten-Tec. It is available as a 5w kit or with an optional higher power amplifier to build in. I have one and it works well.

Dave Heil K8MN

975. Can I use CFS455 with MC3359 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <3899fb63@news.marun.edu.tr>
Source record: 63447

hi
I have FR-146 receiver kit from Ramsey .
Ramsey used MC3359 Fm receiver IC and NE602
I want use CFS455 ceramic filter with MC3359 IC , is this possible ?
also I want to use 3 pole helical filter for signal input to NE602 .
what is your idea ?
73`s TA2AD

976. RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: JGinNY <jgovost1@twcny.rr.com>
Message-ID: <389A3874.F6F9C66A@twcny.rr.com>
Source record: 63448

Got an old tube-type VHF transciever for 50 Mc., circa. 1963 (Lafayette)

2E26 final amp, 15 W input

The TX output has a pi network tank circuit.
Also, there is a TVI trap on the output. This trap consists of a series L/C connected across the coax antenna jack. It is meant to resonate on TV channel 2, I believe.

Here's the ?:
Also connected across the antenna jack is a 1 K ohm resistor.
Is this part of the TVI trap, or what is the resistor's function?

Note this: At one point, I removed the L/C trap and the resistor from the rig. After I did this, the rig would not give _any_ RF output into an antenna. Zip. However, if I replaced the 6m antenna with a DUMMY LOAD, the RF amp loaded up fine and gave a very good output level. (Why would that make any difference?)

I reinstalled the 1 K resistor (leaving the L/C trap out) and lo and behold the amp would give a good RF output level again, both with a dummy load and with an actual antenna.

So...?? I have referenced numerous other transmitter circuits in older HANDBOOKS, using similar final tubes and output circuits, and none of them show any such resistance connected across the output. This should be really straightforward, but I'm not sure what is going on here.

Can anyone offer a possible explanation?
mni tnx
JG - N1AEP

pse reply to jwgbee@hotmail.com

977. Re: PIC 16F84 and Ham Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: jacksonharbor@my-deja.com
Message-ID: <87akhbciu1@nnrp1.deja.com>
Source record: 63578

In article <862qj5$de4$1@lola.ctv.es>,
"colinlowe@jet" <colinlowe@jet.es> wrote:
> I am looking for any Amateur radio related
projects using the PIC16F84.

I've put a few PIC 16F84 based projects
(basically source code and schematics) on my
website:

<http://jacksonharbor.home.att.net/projects.htm>

Best Regards,

Chuck Olson, WB9KZY
Jackson Harbor Press

Sent via Deja.com http://www.deja.com/
Before you buy.

978. Re: HF transmission sample.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: rudder_NoCannedOffal@gulfcoast.net
Message-ID: <8ECF561E0zzz@209.26.110.208>
Source record: 63579

titus@ieee.org (Titus Cheung) wrote in
<qNam4.53771$A5.1041276@news1.rdc1.bc.home.com>:

>Dear List:
>
>Can someone send me a sample of a typical voice message received using HF?
>I'm trying to analyze the noise and interference characteristics but I don't
>have a HF radio.

Try http://www11.cds.ne.jp/~cqdx/dspsnd.htm and see if they are long enough for
your purpose.

--
Regards,
Malcolm

(To reply via email, remove all between rudder and @)

979. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000203090433.20978.00002137@ng-cg1.aol.com>
Source record: 63580

>I would like to get information on how to build a 2m tube amplifier with 2X
>4CX250B or some other tubes
>The amplifier should produce more than 500W on SSB

I believe there is one that meets that description in the 1962 ARRL handbook.

Doug Moore KB9TMY (Formerly K6HWY)

980. Re: Question: D-104 mic integration to FT-920

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: "Robert G. Schaffrath, N2JTX" <rschaffrath!NO@SPAMacm.org>
Message-ID: <38999262.FFB@SPAMacm.org>
Source record: 63581
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

John (KB3CDF) wrote:
>
> Howdy:
>
> Need help matching D-104 mic to FT-920 (Yaesu). Aside from the connector
> selection, can any "GURU-ELMER - HAM" tricks of the hobby be shared. Perhaps,
> other research can be suggested. A "point" in the right direction would be a
> great start.
>
> Thanks in advance.
>
> --
> ~~~ ~~~ ~~~ ~~~
> KB3CDF
> John L. Murphy
> 73

What stand are you using with the D-104, T-UG8 or T-UG9? The T-UG8 is a straight through connection and has a very high impedance off of the crystal which does need an impedance matching network. There was an article in QST early last year, around the February to May timeframe, about building such a circuit. If you have a T-UG9, it has a built in amplifier and an impedance around 5K. It matches very well as-is. In fact, I am using my T-UG9 with my Yaesu FT-757 GXII without any additional circuitry and it works great.

--
Robert G. Schaffrath, N2JTX
mailto:rschaffrath!NO@SPAMacm.org
(remove !NO@SPAM to reply)

981. FA / 2 RCA 6146's / 4 Door knobs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000203095502.28798.00001172@ng-fw1.aol.com>
Source record: 63582

For Bids

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=252120808

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=252128712

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=252145348

Thanks

982. FA / Eimac 304 TL New Old Stock

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000203100742.28803.00001184@ng-fw1.aol.com>
Source record: 63583

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=251213314

Thanks

983. Re: Question: D-104 mic integration to FT-920

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <3899A768.2ED04696@ix.netcom.com>
Source record: 63584
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

"John (KB3CDF)" wrote:

> Howdy:
>
> Need help matching D-104 mic to FT-920 (Yaesu). Aside from the connector
> selection, can any "GURU-ELMER - HAM" tricks of the hobby be shared. Perhaps,
> other research can be suggested. A "point" in the right direction would be a
> great start.
>
> Thanks in advance.
>
> --
> ~~~ ~~~ ~~~ ~~~
> KB3CDF
> John L. Murphy
> 73

HI John -- in Dave Heil's Book "Heil Ham Radio Handbook" -- Melco Publihing -- P.O. Box 26 , Marissa Ill, 62257, he dicusses the problem of using a Hi Z Mic (D-104) into a low impedance mic input (many solid state rigs). He suggests using a 100K resistor or higher in series with the D-104 hot lead. And better yet (I suspect) is using a matching audio transformer. Some where I saw a UTC part for a matching transformer -- but don't know if they are in biz any more. Anyway you might explore these choices.

Keep those LollyPops speaking
--
73 From Rod In San Diego

AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 565,000 visits on the counter
http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

984. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: see_signature@airmail.net
Message-ID: <AA364AD887FABDD5.3FA0D6416B9709D4.D37A2D41A61BEE7A@lp.airnews.net>
Source record: 63585

>I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
>good deal or a waste of money?

One day I found a Ramsey "Dual Tone Encoder - Decoder"
kit for $7.45. I thought that a good deal until I returned
home and discovered the kit consisted simply of a 567. It
can encode and/or decode only a single tone, no matter what
counting system one uses.
I figure that this was a relatively cheap lesson
regarding Ramsey's truth in labeling and the presumed
intelligence of their target market.

Henry Gardiner AC5LA
Tioga, TX, USA

Email address: "see_signature" -> "a0015717"
Newsgroup replies may serve better the public interest.

985. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: see_signature@airmail.net
Message-ID: <3678CC673EC2F7AA.48CC207431529BE1.97184EB4159C53DF@lp.airnews.net>
Source record: 63586

>I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
>good deal or a waste of money?

[Correction regarding my previous post]: One day I found
a Ramsey "Dual Tone Encoder - Decoder" kit for $7.45. I
thought that a good deal until I returned home and
discovered the kit consisted simply of a 567, circuit board
and related components. It can encode and/or decode only a
single tone, no matter what counting system one uses.
I figure that this was a relatively cheap lesson
regarding Ramsey's truth in labeling and the presumed
intelligence of their target market.

Henry Gardiner AC5LA
Tioga, TX, USA

Email address: "see_signature" -> "a0015717"
Newsgroup replies may serve better the public interest.

986. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: goldreged@aol.comJUNKBLOK
Message-ID: <20000203115821.25724.00001388@ng-ff1.aol.com>
Source record: 63587
Body handling: HTML body converted to readable text

<>

Get the ARRL Handbook. It had a couple VHF tube amp projects.
Ed G.
KB1DQX
(Please Remove "JUNKBLOK" to E-mail.
Unless it's a Flame.)

987. Re: Question: D-104 mic integration to FT-920

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <N0jm4.484$%n5.10355@dfiatx1-snr1.gtei.net>
Source record: 63588
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

The hated Radio Shack still sells miniature impedance matching
transformers - I just bought one there a couple of weeks ago... They
work quite well between hi-low impedance loads.

--
Gary - KJ6Q
= = = = = = = =
Ever hear of an on-duty cop being mugged?
Why not? CLUE: it's NOT his billyclub...

ac6v <ac6v@ix.netcom.com> wrote in message
news:3899A768.2ED04696@ix.netcom.com...
> "John (KB3CDF)" wrote:
>
> > Howdy:
> >
> > Need help matching D-104 mic to FT-920 (Yaesu). Aside from the
connector
> > selection, can any "GURU-ELMER - HAM" tricks of the hobby be
shared. Perhaps,
> > other research can be suggested. A "point" in the right direction
would be a
> > great start.
> >
> > Thanks in advance.
> >
> > --
> > ~~~ ~~~ ~~~ ~~~
> > KB3CDF
> > John L. Murphy
> > 73
>
> -------
> HI John -- in Dave Heil's Book "Heil Ham Radio Handbook" -- Melco
Publihing --
> P.O. Box 26 , Marissa Ill, 62257, he dicusses the problem of using a
Hi Z Mic
> (D-104) into a low impedance mic input (many solid state rigs). He
suggests using a
> 100K resistor or higher in series with the D-104 hot lead. And
better yet (I
> suspect) is using a matching audio transformer. Some where I saw a
UTC part for a
> matching transformer -- but don't know if they are in biz any more.

Anyway you
> might explore these choices.
>
> Keep those LollyPops speaking
> --
> 73 From Rod In San Diego
> ----
> AC6V INDEX TO DX AND HAM RADIO
> FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
> Over 565,000 visits on the counter
> http://www.ac6v.com/ -- General Ham Radio
> http://www.ac6v.com/pagedx.html -- DX Reference Pages
>
>

988. FA Tubes & Parts on ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000203130712.28792.00001458@ng-fw1.aol.com>
Source record: 63589

Dowkey Relay
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=251213314

High Voltage Capacitors
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=251232207

Eimac 4PR 125A amplifier tube
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250554475

Heathket 2 meter amplifier
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250638994

RCA 4-65 tube
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250575525

Thanks for looking

989. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <949601988.1157627510@news.indigo.ie>
Source record: 63590

On Wed, 02 Feb 2000, Martin Rask wrote:
>Hello
>I would like to get information on how to build a 2m tube amplifier with 2X
>4CX250B or some other tubes
>The amplifier should produce more than 500W on SSB
>best regards Martin SM7VHS

VHF UHF Manual (RSGB) p 5.94
"High-power amplifier for 144 MHz"

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page: http://www.qsl.net/ei9gq

Linux 2.2.12-20

990. Re: HF transmission sample.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <949601989.1925744705@news.indigo.ie>
Source record: 63591

On Thu, 03 Feb 2000, Titus Cheung wrote:
>Dear List:
>
>Can someone send me a sample of a typical voice message received using HF?
>I'm trying to analyze the noise and interference characteristics but I don't
>have a HF radio.
>
>Thanks
>Titus

Try: http://www.qsl.net/ei9gq/regen.html At the bottom of the page,
you will find links to some .wav files. I made these recordings to
show that it is possible to receive DX signals with a very
simple TRF receiver.

If these samples are not suitable, let me know what you need.

There are a couple of websites where you can remotely operate
a HFreceiver. Sorry! I can't remember the details.

73, Ed. EI9GQ.

--

Remove 'X' to reply.

EI9GQ Homebrew radio page http://www.qsl.net/ei9gq

Linux 2.2.12-20

991. Amplifier Parts & Keyer on ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000203134535.27125.00001246@ng-ca1.aol.com>
Source record: 63592

Eimac 4 E 27 Amplifier Tube
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250572085

8072 Tube
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250558950

Dowkey Relay
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=251218074

Heathket Elec Keyer
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250646140

Eimac 3CX100A5
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=250567926

992. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <389A124A.6C982796@home.com>
Source record: 63593

The ARRL VHF Manual from 1965 has a 3X 4CX250 amp.

Martin Rask wrote:

> Hello
> I would like to get information on how to build a 2m tube amplifier with 2X
> 4CX250B or some other tubes
> The amplifier should produce more than 500W on SSB
> best regards Martin SM7VHS

993. Re: FS-23 Sonar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-03 00:00:00 UTC
From: jrobmills@aol.comremove
Message-ID: <20000203160153.02477.00001237@ng-fc1.aol.com>
Source record: 63594

Sold.

Rob Mills ~~~

994. Re: PC Based Ham Radio Software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: amx@i.am
Message-ID: <87dlafflh1@nnrp1.deja.com>
Source record: 63449

In article <85vr3q$l80$1@nntp5.atl.mindspring.net>,
"Wolfman" <NoSpam@stopspam.spam> wrote:
> I've seen 'em albeit I haven't looked closely. Does anyone know of or
have
> feedback on Software based Ham Radio. I suspect there would be some
> hardware to go along with it. Let me know your thoughts.
>

See http://www.dxsoft.com

WBR,
Sergei

Sent via Deja.com http://www.deja.com/
Before you buy.

995. Help needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: YZ7REA/45AT142 Vladimir <atomski@EUnet.yu>
Message-ID: <389A1344.F549E788@EUnet.yu>
Source record: 63450
Body handling: Binary attachment payload not displayed: atomski.vcf

Hello,
I'm sorry if this is off the topic, but I really need this info.
Does anyone have the COMPLETE info on amateur modes (modulations)
abreviations like J3E, F3C etc. I'd like to know which one is which.
Thank you in advance...

BDW does anyone have some plans for making a vertical omni-directional
antenna for 23cm? I want to use it on our ATV repeater...

Best regards de
YZ7REA Vladimir

[One or more binary attachments are retained only in the source text.]

996. Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: wa2ise@netcom.com
Message-ID: <87e421lps1@nntp9.atl.mindspring.net>
Source record: 63451
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

See the diagram and a picture of it at:
http://home.netcom.com/~wa2ise/radios/dw117.jpg

It should also operate just fine on 220V and 100V.

997. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$22fepf$upa@gw.ihg.com>
Source record: 63452
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

Robert Casey <wa2ise@netcom.com> wrote in message
news:87e421lps1@nntp9.atl.mindspring.net...
> See the diagram and a picture of it at:
> http://home.netcom.com/~wa2ise/radios/dw117.jpg
>
> It should also operate just fine on 220V and 100V.

100Volts, yes fine, it should work no hassles.

But unless the 100K resistors are big enough, no way on 220/240 volts. The current through the two 100K resistors and the four diodes will more than double, and the power dissipation will therefore quadruple. It's unlikely that the resistors were that much over-specced as to handle four times the power that the circuit would normally dissipate.

Rough calculations give a power of 0.3W dissipated by the two resistors. That's 0.15W each, and if they are 1/8 watt resistors (for small size), or even smaller, then that's too much power for their ratings.

Also, there will be at least 1.2mA passing through the 1n4148's, which is OK, since IIRC they're rated at something like 50mA.

You need to be careful in categorically stating that something that is designed for 110V should work fine on 240V when all their doing is using dropping resistors..

David.

998. WANT Tube HiFi or stereo amps: buying or ham & radio stuff to trade. ANY CONDITION

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: cosmotronics@my-deja.com
Message-ID: <87esn4$an6$1@nnrp1.deja.com>
Source record: 63453

Please E-mail direct to: olds98@together.net with details

WANT TO BUY:

Any TUBE HiFi or stereo amplifiers & receivers, DEAD OR ALIVE !
Please email directly me with details as to condition/price.
May have some old radio & ham stuff to trade.
Thanks! RHAnderson

Sent via Deja.com http://www.deja.com/
Before you buy.

999. Raytheon CK722 and other early transistors question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Allan Pellnat <kx2h@worldnet.att.net>
Message-ID: <PoBm4.1322$Ks4.25961@bgtnsc06-news.ops.worldnet.att.net>
Source record: 63454
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I'm doing some research for an upcoming display of the history of the transistor and transistor radios for the AWA Electronic Communication Museum.

It seems that the general opinion is that the Raytheon CK722 transistor was the first mass produced for general consumption. However in poking around in some old Allied, Hudson, et al catalogs for 1953 I find some others listed. For example:

Allied Radio Catalog #131 for the year 1953, page 55, the first offering of transistors, lists 3 types available from either GE or Raytheon. GE G11 and G11A are Germanium Point Contact types. The only difference between them is that the G11A is □additionally tested for operation in trigger circuits□. Raytheon has a single type CK716 Germanium Point Contact.

Hudson Radio & TV Corp Catalog #H-53 for the year 1953, page 65 Shows same as Allied Radio #131. Same catalog, page 190 shows five types from Transistor Products Inc. They are Germanium Point Contact identified as types 2A, 2B, 2C, 2D and 2E.

Newark Electric Catalog #53 for the year 1953, page 65 Shows same as Allied Radio #131.

Then in 1954, Allied Radio Catalog #135 for the year 1954, page 63. Adds RCA to the manufacturers offering two Point Contact and two Junction types. The two GE types are the same as listed in 1953. Raytheon now lists three types. The CK716 is the same as in 1953 and two new types CK721 and CK722, Junction type transistors are added.

The following year, 1955, the CK716 was no longer listed.

So the question is who was first, GE, or Raytheon?

What happened to the CK716?

Allan Pellnat
KX2H

1000. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Gerry Schneider <gerry@mpatico.ca>
Message-ID: <389AE157.66C1D02B@mpatico.ca>
Source record: 63455
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

David Emrich wrote:

> But unless the 100K resistors are big enough, no way on 220/240 volts. The
> current through the two 100K resistors and the four diodes will more than
> double, and the power dissipation will therefore quadruple. It's unlikely
> that the resistors were that much over-specced as to handle four times the
> power that the circuit would normally dissipate.

Then again, maybe they were! (;>)

> Rough calculations give a power of 0.3W dissipated by the two resistors.
> That's 0.15W each, and if they are 1/8 watt resistors (for small size), or
> even smaller, then that's too much power for their ratings.

Actually, the total is half of that, so at 75 mW each, I think it's OK.

Gerry

1001. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <jxtm4.2844$oU2.667948@tw12.nn.bcandid.com>
Source record: 63456

YZ7REA/45AT142 Vladimir wrote in message <389A1344.F549E788@EUnet.yu>...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abreviations like J3E, F3C etc. I'd like to know which one is which.
>
> Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
save you some long download time, I have attached the appropriate section below. Use a fixed width font to format this correctly.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

~~~~~~
[Code of Federal Regulations]
[Title 47, Volume 1, Parts 0 to 19]
[Revised as of October 1, 1998]
From the U.S. Government Printing Office via GPO Access
[CITE: 47CFR2.201]
[Page 520-521] TITLE 47--TELECOMMUNICATION
CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION
PART 2--FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS; GENERAL RULES AND REGULATIONS--Table of Contents
Subpart C--Emissions
Sec. 2.201 Emission, modulation, and transmission characteristics.
The following system of designating emission, modulation, and transmission characteristics shall be employed.
(a) Emissions are designated according to their classification and their necessary bandwidth.
(b) A minimum of three symbols are used to describe the basic characteristics of radio waves. Emissions are classified and symbolized according to the following characteristics:
(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:
(1) Emission of an unmodulated carrier..... N
[[Page 521]]
~~~~~~

(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation ``F'' is indicated, Phase
modulation ``G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:\1\.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

\1\ Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code

modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:\2\

\2\ In this context the word ``information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....
X
(f) Type B emission: As an exception to the above principles, damped

waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984][[Page 522]]

1002. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <Bztm4.2847$oU2.669536@tw12.nn.bcandid.com>
Source record: 63457

YZ7REA/45AT142 Vladimir wrote in message <389A1344.F549E788@EUnet.yu>...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abreviations like J3E, F3C etc. I'd like to know which one is which.
>
> Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
save you some long download time, I have attached the appropriate section below. Use a fixed width font to format this correctly.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

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[Title 47, Volume 1, Parts 0 to 19]
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[Page 520-521] TITLE 47--TELECOMMUNICATION
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(b) A minimum of three symbols are used to describe the basic characteristics of radio waves. Emissions are classified and symbolized according to the following characteristics:
(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:
(1) Emission of an unmodulated carrier..... N
[[Page 521]]
~~~~~~

(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation ``F'' is indicated, Phase
modulation ``G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:\1\.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

\1\ Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code

modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:\2\

\2\ In this context the word ``information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....
X
(f) Type B emission: As an exception to the above principles, damped

waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984][[Page 522]]

1003. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <DPtm4.2869$oU2.675227@tw12.nn.bcandid.com>
Source record: 63458

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
>
>Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
save you some long download time, I have attached the appropriate section below. Use a fixed width font to format this correctly.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

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[Page 520-521]
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(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1004. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <vQtm4.2874$oU2.673607@tw12.nn.bcandid.com>
Source record: 63459

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
>
>Best regards de
> YZ7REA Vladimir

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73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

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(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1005. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <kRtm4.2876$oU2.676187@tw12.nn.bcandid.com>
Source record: 63460

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
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Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1006. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <8Ttm4.2878$oU2.676073@tw12.nn.bcandid.com>
Source record: 63461

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
>
>Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
save you some long download time, I have attached the appropriate section below. Use a fixed width font to format this correctly.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

[Code of Federal Regulations]
[Title 47, Volume 1, Parts 0 to 19]
[Revised as of October 1, 1998]
From the U.S. Government Printing Office via GPO Access
[CITE: 47CFR2.201]
[Page 520-521]
TITLE 47--TELECOMMUNICATION
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PART 2--FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS:
GENERAL RULES AND REGULATIONS--Table of Contents
Subpart C--Emissions
Sec. 2.201 Emission, modulation, and transmission characteristics.
The following system of designating emission, modulation, and transmission characteristics shall be employed.
(a) Emissions are designated according to their classification and their necessary bandwidth.
(b) A minimum of three symbols are used to describe the basic characteristics of radio waves. Emissions are classified and symbolized according to the following characteristics:
(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1007. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <H3um4.2901$oU2.681023@tw12.nn.bcandid.com>
Source record: 63462

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[Page 520-521]
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(2) Second symbol--nature of signal(s) modulating the main carrier;
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Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
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(2) A single channel containing quantized or digital information
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without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1008. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <%num4.2951$oU2.688546@tw12.nn.bcandid.com>
Source record: 63463

YZ7REA/45AT142 Vladimir wrote in message ...
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73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

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(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
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without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
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(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
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(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1009. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <4pum4.2953$oU2.689168@tw12.nn.bcandid.com>
Source record: 63464

YZ7REA/45AT142 Vladimir wrote in message ...
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(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
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Emissions where the main carrier is directly modulated by a
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modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
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(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
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(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
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(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
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X
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Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <Ocum4.2920$oU2.684424@tw12.nn.bcandid.com>
Source record: 63465

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--Phase modulation.....
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Note: Whenever frequency modulation "F'' is indicated, Phase
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D
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--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
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Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <Ndum4.2925$oU2.685106@tw12.nn.bcandid.com>
Source record: 63466

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
>
>Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
save you some long download time, I have attached the appropriate section below. Use a fixed width font to format this correctly.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

[Code of Federal Regulations]
[Title 47, Volume 1, Parts 0 to 19]
[Revised as of October 1, 1998]
From the U.S. Government Printing Office via GPO Access
[CITE: 47CFR2.201]
[Page 520-521]
TITLE 47--TELECOMMUNICATION
CHAPTER I--FEDERAL COMMUNICATIONS COMMISSION
PART 2--FREQUENCY ALLOCATIONS AND RADIO TREATY MATTERS:
GENERAL RULES AND REGULATIONS--Table of Contents
Subpart C--Emissions
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The following system of designating emission, modulation, and transmission characteristics shall be employed.
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(1) First symbol--type of modulation of the main character;
(2) Second symbol--nature of signal(s) modulating the main carrier;
(3) Third symbol--type of information to be transmitted.
Note: A fourth and fifth symbol are provided for additional information and are shown in Appendix 6, part A of the ITU Radio Regulations. Use of the fourth and fifth symbol is optional. Therefore, the symbols may be used as described in Appendix 6, but are not required by the Commission.
(c) First Symbol--types of modulation of the main carrier:

(1) Emission of an unmodulated carrier..... N
[Page 521]
(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
L
--Modulated in position/phase.....
M
--In which the carrier is angle-modulated during the period of
Q
the pulse.....
--Which is a combination of the foregoing or is produced by
V
other means.....
(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
(7) Cases not otherwise covered.....
X

Emissions where the main carrier is directly modulated by a
signal which has been coded into quantized form (e.g. pulse code
modulation) should be designated under (2) or (3).

(d) Second Symbol--nature of signal(s) modulating the main carrier:
(1) No modulating signal.....
0
(2) A single channel containing quantized or digital information
1
without the use of a modulating subcarrier, excluding time-
division muliplex.....
(3) A single channel containing quantized or digital information
2
with the use of a modulating sub-carrier, excluding time-division
multiplex.....
(4) A single channel containing analogue information.....
3
(5) Two or more channels containing quantized or digital
7
information.....
(6) Two or more channels containing analogue information.....
8
(7) Composite system with one or more channels containing
9
quantized or digital information, together with one or more
channels containing analogue information.....
(8) Cases not otherwise covered.....
X
(e) Third Symbol--type of information to be transmitted:

In this context the word "information'' does not include
information of a constant, unvarying nature such as is provided by
standard frequency emissions, continuous wave and pulse radars, etc.
(1) No information transmitted.....
N
(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
B
(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

X
(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1012. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <Ukum4.2937$oU2.687742@tw12.nn.bcandid.com>
Source record: 63467

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
>abbreviations like J3E, F3C etc. I'd like to know which one is which.
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>Best regards de
> YZ7REA Vladimir

These emission designations can be found in Title 47 of the Code of Federal Regulations, Section 2.201. This can be accessed directly in the USA. However, to
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73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

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(c) First Symbol--types of modulation of the main carrier:

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(2) Emission in which the main carrier is amplitude-modulated
(including cases where sub-carriers are angle-modulated):.....
--Double-sideband.....
A
--Single-sideband, full carrier.....
H
--Single-sideband, reduced or variable level carrier.....
R
--Single-sideband, suppressed carrier.....
J
--Independent sidebands.....
B
--Vestigial sideband.....
C
(3) Emission in which the main carrier is angle-modulated:.....
--Frequency modulation.....
F
--Phase modulation.....
G
Note: Whenever frequency modulation "F'' is indicated, Phase
modulation "G'' is also acceptable.
(4) Emission in which the main carrier is amplitude and angle-
D
modulated either simultaneously or in a pre-established sequence...
(5) Emission of pulses:.....
--Sequence of unmodulated pulses.....
P
--A sequence of pulses:
--Modulated in amplitude.....
K
--Modulated in width/duration.....
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--In which the carrier is angle-modulated during the period of
Q
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(6) Cases not covered above, in which an emission consists of the
W
main carrier modulated, either simultaneously or in a pre-
established sequence, in a combination of two or more of the
following modes: amplitude, angle, pulse.....
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Emissions where the main carrier is directly modulated by a
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(2) Telegraphy--for aural reception.....
A
(3) Telegraphy--for automatic reception.....
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(4) Facsimile.....
C
(5) Data transmission, telemetry, telecommand.....
D
(6) Telephony (including sound broadcasting).....
E
(7) Television (video).....
F
(8) Combination of the above.....
W
(9) Cases not otherwise covered.....

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(f) Type B emission: As an exception to the above principles, damped waves are symbolized in the Commission's rules and regulations as type B emission. The use of type B emissions is forbidden.
(g) Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by the necessary bandwidth of the emission as indicated in Sec. 2.202(b)(1).

[49 FR 48697, Dec. 14, 1984; Page 522]

1013. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <_mum4.2945$oU2.686386@tw12.nn.bcandid.com>
Source record: 63468

YZ7REA/45AT142 Vladimir wrote in message ...
>Does anyone have the COMPLETE info on amateur modes (modulations)
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[49 FR 48697, Dec. 14, 1984; Page 522]

1014. Re: RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <0NCm4.7568$OI1.277923@news5.giganews.com>
Source record: 63469

It appears that a dc path is required through the load for operation. Check the diagram to see why; perhaps it's needed for some kind of feedback or something.

It's wise to have a dc path in any case to prevent high potential static buildup. But why the radio won't transmit without it requires looking at the diagram.

73, Bob K6DDX

1015. WTB 6 PIN TUBE BASES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <13797-389AF87E-29@storefull-123.iap.bryant.webtv.net>
Source record: 63470

KNOCK THE GLASS OFF THE DEFECTIVE 6 PIN TUBES IN THAT BOX UNDER THE
STAIRS, BOX THEM UP AND SEND THEM TO ME. $1.00 EACH PLUS YOUR POSTAGE.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

1016. Re: Raytheon CK722 and other early transistors question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Gene Jenkins <"sop(NOSPAM)"@erols.com>
Message-ID: <389ACFD7.792C@erols.com>
Source record: 63471
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Allan Pellnat wrote:
<Clip>
> The following year, 1955, the CK716 was no longer listed.
>
> So the question is who was first, GE, or Raytheon?
>
> What happened to the CK716?
>
> Allan Pellnat
> KX2H

As a teenager at the time price was a consideration for me. Raytheon's CK722 was $.99. Another affordable transistor at the time was the GE 2N107 which was a little more at $1.25. Used to ride my bicycle to Henry Radio to get them. That's when Henry Radio was a COOL place.

Gene
N4JEE (Original Technician, soon to be General/Lite)

1017. Problems with Altai dipper

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Hubert Smits <hubert.smits@wxs.nl.nospem>
Message-ID: <87fa3t$navq$1@reader4.wxs.nl>
Source record: 63472

I have bought a secondhand grid dipper: ALTAI KDM-6. But unfortunately it down't dip (okay, I'm ready for all your jokes!). The thing is it does oscillate, I can check that with a receiver. But when trying to use it as a dipper the needle doen't move at all. Can anybody suggest what tests to perform to find the prolem? OR does anybody have the circuit diagram for this dipper?

Thnaks, Hubert

1018. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Steven Van Hulle <stevenvh@pandora.be>
Message-ID: <HwGm4.896$fz3.21570@afrodite.telenet-ops.be>
Source record: 63473
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

Gerry Schneider <gerry@mpatico.ca> wrote in message
news:389AE157.66C1D02B@mpatico.ca...
>
>
> David Emrich wrote:
>
> > But unless the 100K resistors are big enough, no way on 220/240 volts.
The
> > current through the two 100K resistors and the four diodes will more
than
> > double, and the power dissipation will therefore quadruple. It's
unlikely
> > that the resistors were that much over-specced as to handle four times
the
> > power that the circuit would normally dissipate.
>
> Then again, maybe they were! (;>)
>

I've no problems putting 1W into 1/4W resistors, even for a long time,
provided the applied voltage is clean.
Don't do this if you plan to run a 100K production of your design, though
:-)

I missed the original post, but from the subject I guess you want to run a
low-voltage (5V?), low-power (5mA?) device directly from the powerline. Why
not using a capacitor instead of the series resistor(s)? It dissipates
virtually no power.

Steven
--
Computers are useless; they can only give you answers -- Picasso

1019. FS: AA5 tube radio kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: weathrship@aol.com
Message-ID: <20000204160559.01122.00000714@ng-fe1.aol.com>
Source record: 63474

see:

www.ghostmoon.bigstep.com

1020. Re: 4-1000 amplifier plans

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Jim Steffey <jimsteff@iserv.net>
Message-ID: <PQHm4.22524$ox5.5257018@tw11.nn.bcandid.com>
Source record: 63475

I have several 4-1000 tubes available for sale if you get that far.

Jim Steffey respond to jimsteff@iserv.net

1021. Re: Question: D-104 mic integration to FT-920

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Robert <a2ir612@freewwweb.com>
Message-ID: <87fme0$c50$1@news.smartworld.net>
Source record: 63476
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.antenna

There was an article in QST a few months ago on matching the D104 to the new low impedance radios.

Robert

ac6v <ac6v@ix.netcom.com> wrote in message news:3899A768.2ED04696@ix.netcom.com...
"John (KB3CDF)" wrote:

> Howdy:
>
> Need help matching D-104 mic to FT-920 (Yaesu). Aside from the connector
> selection, can any "GURU-ELMER - HAM" tricks of the hobby be shared. Perhaps,
> other research can be suggested. A "point" in the right direction would be a
> great start.
>
> Thanks in advance.
>
> --
> ~~~ ~~~ ~~~ ~~~
> KB3CDF
> John L. Murphy
> 73

HI John -- in Dave Heil's Book "Heil Ham Radio Handbook" -- Melco Publihing --
P.O. Box 26 , Marissa Ill, 62257, he dicusses the problem of using a Hi Z Mic
(D-104) into a low impedance mic input (many solid state rigs). He suggests using a
100K resistor or higher in series with the D-104 hot lead. And better yet (I suspect) is using a matching audio transformer. Some where I saw a UTC part for a
matching transformer -- but don't know if they are in biz any more. Anyway you
might explore these choices.

Keep those LollyPops speaking
--
73 From Rod In San Diego

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http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

1022. Re: Raytheon CK722 and other early transistors question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: RSherry@metricom.com
Message-ID: <389b609f.188398092@news.metricom.com>
Source record: 63477
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

The GT-34 was also affordable at $.99. I was getting $0.50 per week allowance. I used some of each for audio amplifiers. The GT-34 generally had higher gain. I had to ride six miles by bike to get parts (Electronic City at Mid- Island Plazza or Electronic City (store name?) at Rosevelt Field Shopping Center) or wait to Saturday and take the bus to go to Hempstead at Standard Parts. Once in a while you could get wet slug tantalum caps (Mallory) at charity prices (100 piece prices) from Rosevelt Field Shopping Center store. This was about 1954,1955 and I was 12 years old. All this was on Long Island.
Russ, WA2GWV
On Fri, 04 Feb 2000 08:10:47 -0500, Gene Jenkins
<"sop(NOSPAM)"@erols.com> wrote:

>Allan Pellnat wrote:
><Clip>
>> The following year, 1955, the CK716 was no longer listed.
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>> So the question is who was first, GE, or Raytheon?
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>> Allan Pellnat
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>As a teenager at the time price was a consideration for me. Raytheon's
>CK722 was $.99. Another affordable transistor at the time was the GE
>2N107 which was a little more at $1.25. Used to ride my bicycle to Henry
>Radio to get them. That's when Henry Radio was a COOL place.
>
>Gene
>N4JEE (Original Technician, soon to be General/Lite)

1023. Re: Raytheon CK722 and other early transistors question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000204181324.28236B-100000@oso.slonet.org>
Source record: 63478
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Oh forgot to mention----I finally got an engineering degree from Berkeley and went to work for Raytheon!! I was assigned to the CK722 line you mentioned. Hell bells, I did not know a transistor from a hot rock, but I tried hard and enventually got back to Waltham. From there I continued to screw up and had a hellva good time. Cliff K7RR

1024. Re: 900 Megahertz Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <s9n7507rdh163@corp.supernews.com>
Source record: 63479

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

Gee, guys ... it's nice to see the nice comments on the AT&T 9520 phone.

I am proud to say that I one of the principal architects of the chipset that
makes it work :-) I also designed the all-digital FSK modem therein which
helps it get such good range (the modem performs within about 1 dB
of theoretical ideal). Another thing that helps the system get such good
range is that it uses Reed-Solomon Forward Error Correction (done in
software) to help extend the range by fixing bits that are received in error
as you get near what would otherwise be "end of range" ... that keeps the
sound quality better farther out ... to the best of my knowledge its the
first
use of FEC in a consumer cordless phone ... you might also be interested
to know that both the handset and the base contain low-power 100 MIPS
DSP processors, as well as a mixed-signal ASIC and a single-chip RF
transceiver.

The guys in the Lucent Comsumer Products division who designed
the phone around the chipset did a very nice job of making an
attractive phone and getting all the performance the chipset was
designed to deliver.

However, I would recommend against attempting to modify the
phone to add external or extended antennas ... that would invalidate
the FCC Approval ...

73,

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- --
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- --
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

<Dee_Lamzaki@email.msn.com> wrote in message
news:87fq4t$1r5$1@nnrp1.deja.com...
> Yes, this is a wicked phone. I own one too, and when it is transmitting
> on the edge of its range, at 220 mW, it actually gets warm to the touch
> after a while. And, obviously goes through the battery in a hurry. As
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> is impressive. It would not surprise me if this phone were to actually
> achieve more than two miles in open country, and that's without any
> antenna help.
>
>
>
> In article <3891AE79.B4AE9109@Source.Net>,
> "Dana H. Myers K6JQ" <Dana@Source.Net> wrote:
> > This is a multi-part message in MIME format.
> > --------------C45F9F5645158C3FD2B36253
> > Content-Type: text/plain; charset=us-ascii
> > Content-Transfer-Encoding: 7bit
> >
> > WebMonkey wrote:
> >
> > > consultant@representative.com wrote:
> > > >
> > > > Anyone ever successfully add an outside antenna to their portable
> 900 MHz phone?
> > > >
> > > > Thanks.
> > > >
> > > depends on the phone
> > > i've got a motorola flip phone and an external solution was offered
> > > for my model. works fine w/noticeable improvement on the fringe of
> > > portable coverage.
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> > I'm tempted to add an antenna to my ATT 9520 (aka HS-8500). The
> > base unit actually has a short of coax from the PCB to the (apparently
> > resonant) built-in antenna. At a power level of approximately +24dBm,
> > I suspect I could even add a decent omni with a short run of coax and
> > remain inside scope of Part 15 (though I want to re-read it sometime
> > and verify this).
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> Certainly,
> > it has the best range of any cordless phone I've owned (and a fairly

> short
> > battery life!).
> >
> > Dana K6JQ
> >
> > --------------C45F9F5645158C3FD2B36253
> > Content-Type: text/x-vcard; charset=us-ascii;
> > name="Dana.vcf"
> > Content-Transfer-Encoding: 7bit
> > Content-Description: Card for Dana H. Myers K6JQ
> > Content-Disposition: attachment;
> > filename="Dana.vcf"
> >
> > begin:vcard
> > n:Myers;Dana
> > x-mozilla-html:FALSE
> > url:http://www.source.net/dana/
> > adr:;;;;;;
> > version:2.1
> > email;internet:dana@source.net
> > fn:Dana H. Myers K6JQ
> > end:vcard
> >
> > --------------C45F9F5645158C3FD2B36253--
> >
> >
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.
-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBOJucrZe+N6+q84HiEQJKKwCg3kC28Q2LBgUK8OfADiW54Mm8RMUAoNcp
nNu1EdzNzkynZ8QsE7BSx99H
=cGg4
-----END PGP SIGNATURE-----

1025. Re: Broadband VHF frequency doubler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: "aaa@bbb.com" <aaa@bbb.com>
Message-ID: <389AB3EF.3708CB6D@bbb.com>
Source record: 63480

hi,

Iwas planning on building a VCO using a NE602 as VCO + doubler.
Ne602 will certainly operate at this freq, and there is a phillips appnote
that covers the use of NE602 as a doubler.

Roger lascelles wrote:

> Hi !
>
> Your frequency doubled signal will have twice the drift and twice the FM
> noise of the lower frequency oscillator. Are you sure your 100 MHz
> oscillator is worse than twice as bad as the 50 MHz oscillator ?
>
> A two to one tuning ratio is quite ordinary for an oscillator. 1.5 to
> one is easy.
>
> You don't mention actual frequency drift values, but it is quite easy to
> produce respectable oscillators at 100MHz. Many FM receivers have free
> running local oscillators. Hewlett Packard and many others used to sell
> signal genarators containing free running LC oscillators - we have one
> here for 10 to 512 MHz .
>
> Almost anything will oscillate, but stable oscillators have controlled
> bias current. If the transistor is saturating at any point of the
> waveform, it will damp the tuned circuit and degrade noise and
> stability. If you are using a bipolar or FET, throttle back the bias
> current until the oscillator stops, then increase the current somewhat.
>
> Frequency multiplication can be necessary, but rarely at 100MHz.
>
> Regards,
> Roger
>
> Raw Power Radio wrote:
> >
> > While experimenting in my lab, I built a very stable (1kHz of drift)
> > VCO that spans 43MHz to 55Mhz. Redesigning it for 88-108 resulted in a
> > range of only 90-107MHz and degraded stability. Naturally, it occurs to
> > me that doubling the output of the stable 43-55MHz VCO could be a
> > useful approach for a simple 3-meter exciter. Any recommendations for a
> > good doubler circuit, preferably of the "no-tune" variety and without
> > excessive insertion loss? I have seen some application circuits for
> > doublers using the LM/MC1496 balanced modulator, but I am skeptical of
> > the capability of this device at FM broadcast frequencies. (The

> > operating range is vaguely stated as "up to" 100MHz in the datasheets).
> > I am also aware of the practice of feeding one signal to both inputs of
> > a four-quadrant multiplier, but these devices are costly and the ones
> > with which I'm familiar are not usable at hundreds of MHz.
> >
> > * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> > The fastest and easiest way to search and participate in Usenet - Free!
>
> --
> Roger Lascelles
>
> Electro Tools - Worksheets for Electronics
> http://server24.hypermart.net/electrotools/

1026. Re: Can I use CFS455 with MC3359 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-04 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <87hntm$9jn$1@nntp6.atl.mindspring.net>
Source record: 63481

In article <3899fb63@news.marun.edu.tr>, ta2ad <ta2ad@yahoo.com> wrote:
>I have FR-146 receiver kit from Ramsey .
>Ramsey used MC3359 Fm receiver IC and NE602
>I want use CFS455 ceramic filter with MC3359 IC , is this possible ?
>also I want to use 3 pole helical filter for signal input to NE602 .
>what is your idea ?

It would help us if you'd have provided some of the details on whatever the heck a CFS455 is! (Dig, dig, dig). Looks like you're talking about a Murata rectangular can filter. Specs seem ok. The datasheet for the '3359 says that the IF filter impedances are in the range of 1.5k to 2k ohms. Come to think of it, I've a couple of receivers (a scanner and and a "baby monitor") that use the Murata type IF filter with the MC3361.

I did a FM SCA decoder using the '3359 using the Toko HCFM-2455x series (where x = A-E or thereabouts) and found that it was fairly tolerant and had so much gain that just about anything worked. The Toko parts are nice because they're a 3 pin part with .1 inch spacing that matches the pinout of the chip and can have very short connections.

The mixer in the chip isn't anything to write home about overload wise, (neither is the NE602, reportedly) probably a function of the high gain in the whole chip. If you're going for performance, a filter at the first IF before the '3359 will get you more improvement than putting more bucks in the 455 kHz IF filter.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1027. Re: 900 Megahertz Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Dee_Lamzaki@email.msn.com
Message-ID: <87fq4t$1r5$1@nnrp1.deja.com>
Source record: 63482

Yes, this is a wicked phone. I own one too, and when it is transmitting on the edge of its range, at 220 mW, it actually gets warm to the touch after a while. And, obviously goes through the battery in a hurry. As you move in closer to the base, it trottles down, and battery life becomes more normal. I routinely get about three hours of talk time, within my appartment. The fact that it fully recharges in four hours, doesn't hurt either.

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My experience backs this up as well. I live in the city, and the range is impressive. It would not surprise me if this phone were to actually achieve more than two miles in open country, and that's without any antenna help.

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> > depends on the phone
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> > for my model. works fine w/noticeable improvement on the fringe of
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Certainly,
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> Content-Description: Card for Dana H. Myers K6JQ
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> filename="Dana.vcf"
>
> begin:vcard
> n:Myers;Dana
> x-mozilla-html:FALSE
> url:http://www.source.net/dana/
> adr:;;;;;;
> version:2.1
> email;internet:dana@source.net
> fn:Dana H. Myers K6JQ
> end:vcard
>
> --------------C45F9F5645158C3FD2B36253--
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

1028. Re: RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <87fq0r$98b$1@plutonium.btinternet.com>
Source record: 63483

A relatively high value resistor which apparently serves no useful purpose at RF is often there to DC ground parts of the circuit which would otherwise be floating and acquire a high charge. A resistor is cheaper than a choke if the small RF loss can be tolerated.

Any DC current flowing through the resistor may be used somewhere else in the circuit, perhaps in another piece of equipment. Does any current flow through it ?

The series LC anti-TV trap may not now serve a useful purpose. However its removal may de-tune the tank or pi-match circuitry.

1029. Re: Problems with Altai dipper

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Joe McElvenney <joemac@xic.demon.co.uk>
Message-ID: <VA.00000003.04927c98@joe-mcelvenney>
Source record: 63484

Hi,

Three points - if your dipper has a control for the meter level,
make sure that it isn't set too high as this will often mask the dip
(this is very true for LCR bridges also); ensure that the dipper and
tuned-circuit coils are as parallel to each other as you can get them
and make sure you know the approximate resonant frequency of the
circuit you are checking first.

Transistorised dippers in my experience are not as good as the old
tube types. I seem to remember Millen doing an article years ago (QST?)
on the design of such a dipper which was very informative.

73 de G3LLV

Joe
Sheffield
South Yorkshire
United Kingdom

1030. Re: Help needed. - Emission Designations

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Barry Ornitz <ornitz@NOSPAM.tricon.net>
Message-ID: <2ZKm4.22809$ox5.5369491@tw11.nn.bcandid.com>
Source record: 63485

As an OLD-time contributor to the amateur radio newsgroups (since 1983 - before there was an Internet), allow me to apologize for the sloppy multiple postings from my ISP. They put in a new server a week ago and they still have not gotten things right yet.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

1031. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: wa2ise@netcom.com
Message-ID: <87gdo6$82$1@nntp2.atl.mindspring.net>
Source record: 63486
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

In article <newscache$22fepf$upa@gw.ihg.com>,
David Emrich <demrich@ihgtech.com.au> wrote:
>
>Robert Casey <wa2ise@netcom.com> wrote in message
>news:87e421lps1@nntp9.atl.mindspring.net...
>> See the diagram and a picture of it at:
>> http://home.netcom.com/~wa2ise/radios/dw117.jpg
>>
>> It should also operate just fine on 220V and 100V.
>
>100Volts, yes fine, it should work no hassles.
>
>But unless the 100K resistors are big enough, no way on 220/240 volts. The
>current through the two 100K resistors and the four diodes will more than
>double, and the power dissipation will therefore quadruple. It's unlikely
>that the resistors were that much over-specced as to handle four times the
>power that the circuit would normally dissipate.
>
>Rough calculations give a power of 0.3W dissipated by the two resistors.
>That's 0.15W each, and if they are 1/8 watt resistors (for small size), or
>even smaller, then that's too much power for their ratings.
>
>Also, there will be at least 1.2mA passing through the 1n4148's, which is
>OK, since IIRC they're rated at something like 50mA.
>
>You need to be careful in categorically stating that something that is
>designed for 110V should work fine on 240V when all their doing is using
>dropping resistors..
>
Probably should have said to use a pair of 220K resistors in place of the
100K's when using it on 220VAC. That should work. A reason for the
resistors on both legs of the line is to minimize shock hazard current
if a grounded person should touch bare metal in the watch module. My
watch is completely encased in plastic, no exposed metal.

1032. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$xm4gpf$np2@gw.ihg.com>
Source record: 63487
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

Robert Casey <wa2ise@netcom.com> wrote in message
news:87gdo6$82$1@nntp2.atl.mindspring.net...
> In article <newscache$22fepf$upa@gw.ihg.com>,
> David Emrich <demrich@ihgtech.com.au> wrote:
> >
> >Robert Casey <wa2ise@netcom.com> wrote in message
> >news:87e421lps1@nntp9.atl.mindspring.net...
> >> See the diagram and a picture of it at:
> >> http://home.netcom.com/~wa2ise/radios/dw117.jpg
> >>
> >> It should also operate just fine on 220V and 100V.
> >
> >100Volts, yes fine, it should work no hassles.
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> >But unless the 100K resistors are big enough, no way on 220/240 volts.
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> resistors on both legs of the line is to minimize shock hazard current
> if a grounded person should touch bare metal in the watch module. My
> watch is completely encased in plastic, no exposed metal.

The whole concept is of course flawed when it comes to safety. If one of
the resistors should fail short (and it does happen), then the whole watch

risks going live. Regardless of whether the thing is enclosed in plastic or not, I bet the insulation is not spec'ced to handle full mains potential from anywhere inside to anywhere outside. It would never pass UL or other safety testing. I therefore suspect it is not a commercial design. Also, the resistors would have to be special high voltage types, since most are only rated at 100V DC (which isn't the same as 100VAC at all!).

If that is the case, then the originator of the design is committing a gross act of negligence by not having a large warning displayed on all material promoting the "design". This warning should contain wording containing something like "the entire watch should not be touched or exposed to humid environments while under mains power, as the entire device may carry full mains voltages." To do any less is inviting disaster at inexperienced hands. More would be better.

In all, it's a cute idea, but if not done properly is worse than dangerous. A minimum level of responsibility must be taken when dealing with mains. That's why there's standards around.

David.

1033. OE5DXL 9k6 modem for PC/Atari ST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Chris <nibbit@wanadoo.nl>
Message-ID: <87gm1c$1cu8$1@buty.wanadoo.nl>
Source record: 63488

Hello,

if you are interested into using 9k6 packet, but not want to spend to much, maybe this modem is interesting for you.

Hardware & software are develloped by Chris - OE5DXL and is available for Atari ST or PC.

one thing: the L2PCX/L2STX driver only supports hostmode prgs. (ie. SP)

I build the Atari version, and after it worked i have sold my expensive 9k6 TNC ;-) (my modem costed me only 10$)

My website: http://www.qsl.net/pe1nib/

I don't have any experience with the PC version (since my Atari still works great:-)
so if you want to share your experience about the PC version (L2PCX) let me know (pe1nib@qsl.net)

73's Chris de pe1nib

Email: pe1nib@qsl.net

Packet BBS: pe1nib@dk0mwx

1034. Old Radio Catalogs on CD-Rom

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Steve Massey <N6TT@jps.net>
Message-ID: <389be018_2@news.jps.net>
Source record: 63489

Subject: Radio/Telegraph Catalogs on "CD"

Check out the Old Radio & Telegraphy LIST of 105 Catalogs on "CD"s-
HomeSpun Catalogs http://www.telegraph-wireless.com/Homespun

1035. frequ. multiplier with pin diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Peter Bolch <nc-bolchpe@netcologne.de>
Message-ID: <87goi8$q00$1@news.netcologne.de>
Source record: 63490

Agilent suggests in its App. Note 1054 to use a HSMP-3820 PIN diode in a low cost frequency multiplier. This diode is hard to get in small quantities, however. Has anybody built such a multiplier with other PIN diodes?

Peter

1036. RADIOEXPEDITION on Southern Altai

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: altai-es <altai-es@ukg.kz>
Message-ID: <87gu5odct35@mail.nursat.net>
Source record: 63491

What you think of idea of realization of radioexpedition on Southern Altai?

Southern Altai - highland is on the board of Kazakhstan, Russia, China and Mongoly.
Land of lakes and waterfalls, mountain taiga and stormy rivers, deserts and snowy peaks...
In time of Soviet Union this territory had been absolutelly inaccessible for foreign tourists (and furthermore for radioexpedition) - in locale
It is not enough of ham stations.

The base camp of expedition is planned to place in region by highest Fastigiums of Siberia and Altai of a mountain Belooha, lake Markakol and Zaisan.

If you were interested by our proposal, we can be found on ranges 21Mhz, 28Mhz call sign UN8JZZ (collective radio station)

email: altai-es@ukg.kz
phone: 8 (3232) 26 77 97
P.o. 243
Eastern Kazakhstan,
Ust-Kamenogorsk
M.Gorky Str. 21-314

Yours faithfully,
Kairzhan (UN7JJL)

1037. SV: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Martin Rask <martin.rask@mailbox.swipnet.se>
Message-ID: <wOTm4.5850$jg4.11549@nntpserver.swip.net>
Source record: 63492

Hello Ed
I have got this tip from a lot of people so I will run down to the library
next week
to see if they have it or not. thanks for you reply
best regards Martin SM7VHS

> Get the ARRL Handbook. It had a couple VHF tube amp projects.
> Ed G.
> KB1DQX
> (Please Remove "JUNKBLOK" to E-mail.
> Unless it's a Flame.)
>
>

1038. 50-100 Mhz receiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Matt <mattj@flashmail.com>
Message-ID: <389C1725.A6A03182@flashmail.com>
Source record: 63493

Hi all.

I'd appreciate any suggestions on how to go about constructing a 50-100Mhz receiver, with a direct output ie no demodulation. I want to keep it as simple as possible, though I want to be able to pick up fairly faint signals. Would it be feasible to modify a small FM radio receiver?

Thanks,
Matt.

1039. Re: Rx Multicoupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <389c00af.407941268@news.online.no>
Source record: 63494

On Tue, 4 Jan 2000 21:23:14 -0600, "Lionel" <lbooth@ametro.net> wrote:

>I need a schematic to build a rx multicoupler to feed 3 or 4 hf rx's. Any
>references to published literature would be great.
>
>
>
>
need a 12dB amplifier, possibly high IP and a divide by 4 hybrid,
consisting of 5 equal resistors, value 30 ohm, 33 ohm will work well

The amplifier may use a 2N3866 or BFR96. Have a circuit for 14dB
broadband amplifier (1-30MHz) with 2N3866 just tested, also tested a
BFR96 amplifier, this has 15dB gain, was found in QST, but such
circuits are shown in W7ZOI/W1FB's book "Solid state design manual"

my circuits are available as gif files. With 0.1uF capacitors they
will work down below 200kHz, I modified them for use as pre-amps for
136/1800kHz receiption, with 0/10/20dB attenuator

The problem using 50 ohm amplifier with the simple divider is that
unused outputs must be terminated (47 ohm resistor).

73 Jan-Martin LA8AK

1040. Re: 3-500ZG Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <87had6$qm4$1@newsg2.svr.pol.co.uk>
Source record: 63495

Does anyone have an actual Aperex data sheet for the 3-500ZG? I am looking
for a copy (French is OK)
Robin G3LBA
>
>

1041. ATL: Stolen FT470

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: n7ouq@arrl.net
Message-ID: <389c341a.21054023@news.primenet.com>
Source record: 63496
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet,rec.radio.amateur.policy,rec.radio.amateur.space

A Yaesu FT-470, dual-band handheld was stolen here in Tempe, AZ. I am trying to get it back. I can offer a small reward.

Yaesu FT470, serial #2D520533

If located, please contact me, N7OUQ@ARRL.NET or the Tempe Police at (480) 966-6211.

Thanks
Ed (N7OUQ)

1042. Re: frequ. multiplier with pin diodes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <87hfm2aoj1@vax.area.com>
Source record: 63497

In article <87goi8$q00$1@news.netcologne.de>,
Peter Bolch <nc-bolchpe@netcologne.de> wrote:
>
>Agilent suggests in its App. Note 1054 to use a HSMP-3820 PIN diode in a low
>cost frequency multiplier. This diode is hard to get in small quantities,
>however. Has anybody built such a multiplier with other PIN diodes?
>
>
>Peter

I have talked to Ray Waugh of Agilent about this app. note and he
said that PIN diodes of a certain type of construction can act like
step recovery diodes, and that the aforementioned diode has the
correct type of construction. Thus there may exist some other PIN
diodes which also work as SRD's, but it is not true in general that
PIN diodes can be used this way.

Rick Karlquist N6RK (who works for Agilent Labs)

1043. FS: Tubes, 1000's, NOS & used

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <87hr3n$56oc$1@newssvr04-int.news.prodigy.com>
Source record: 63498
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

Please e-mail m.pasternack@prodigy.net for 10 page list. Murray, W6KRC

1044. IRF511 Gate Charge

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: wandrangus@aol.com
Message-ID: <20000205141029.20978.00003010@ng-cg1.aol.com>
Source record: 63499

About 10 years ago I designed a QRP transmitter for an IRF511 MOSFET, which could deliver 2W on 40M at better than 80% efficiency. I recently built one up according to my old schematic, and found that it didn't work very well. Checking, I found that the gate charge on new IRF511 MOSFETs was significantly higher than that on old, 1980's dated ones, which reduced their gain. Both were IR MOSFETs..

Anyone else noticed this? Anyone know how the new parts differ from the old ones? Is there an equivalent part with improved gate charge? I don't have a whole lot of old IRF511's left in my junk box!

Thanks!

Dave KC3ZQ

1045. Re: 50-100 Mhz receiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Robin Birch <robin@falstaf.demon.co.uk>
Message-ID: <V8ly0IAeWJn4EwwQ@falstaf.demon.co.uk>
Source record: 63500

In article <389C1725.A6A03182@flashmail.com>, Matt
<mattj@flashmail.com> writes
>Hi all.
>
>I'd appreciate any suggestions on how to go about constructing a
>50-100Mhz receiver, with a direct output ie no demodulation. I want to
>keep it as simple as possible, though I want to be able to pick up
>fairly faint signals. Would it be feasible to modify a small FM radio
>receiver?
>
>Thanks,
>Matt.
>
Basically yes,
It would be easiest if you choose something that has the frequency range
you want, so lets assume that you have such a beast.

Most receivers only get rid of the received signal at the demodulator at
the end of the IF stage so at best you can take the output of the last
IF or maybe the one prior to that. This should give you the received
signal at the IF frequency, you can the do what you like with it by
feeding it through a small buffer amplifier and then hanging whatever
you want off the end.

If you can't get a set that covers these bands then get the closest
match and you will have to vary the VFO to run over the frequencies that
you want, this could be cumbersome and complicated but is essentially
feasible.

Hope this helps

Robin

Robin Birch robin@falstaf.demon.co.uk

M1ASU/2E0ARJ/M5ABD Old computers and radios always welcome

1046. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <87i53t$dh2$1@newsg2.svr.pol.co.uk>
Source record: 63501

I had this problem with a different make. I replaced the wheel with a copper loaded carbon brush which sits on the wire. You need access to a milling machine to make it fit but you then have multiple contact with the coil and carbon is self lubricating. You may lose a millewatt or so in the brush!!!

Good luck.
Robin G3LBA
JPhelan501 <jphelan501@aol.com> wrote in message
news:20000125174944.03993.00000287@ng-ff1.aol.com...
> I have a new-old-stock roller inductor made by EF Johnson that I want to use in
> an antenna tuner project. It is ceramic with silver plated wire, and with a
> silver plated rolling contact. It squeaks and squeals terribly when rotated.
> Does anyone know if this thing can be lubricated, and with what lubricant?
>
> Thanks in advance.
> 73 de John N3DRA
>

1047. Re: Construction articles for solid-state amps?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <87im2e$q1b@nnrp2.farm.idt.net>
Source record: 63502

<hmilliken@my-deja.com> wrote in message news:86i406oqg1@nnrp1.deja.com...
> Looking for any construction articles on building a high power
> solid-state HF linear. I have a 40v/60A power supply that is just
> begging to be used for something like this. :)

If you can get a higher voltage out of it then you will like
the URL below for an amplifier project:

http://www.ibelings.com/n4ip/sskw/

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

1048. Re: ICOM R2, R10 PC Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-05 00:00:00 UTC
From: gfiber <gfiber@cmc.net>
Message-ID: <389CEA8E.12160935@cmc.net>
Source record: 63503

"Al, N2NKB" wrote:
>
> Does anyone know how to build a programming cable to connect between a PC and
> the ICOM wideband receivers? I would rather "homebrew" my own rather
> than spend $40.
> Al
send an email to icomtech@compuserve.com. Include either a fax number or
snail mail address and request a schematic for the OPC-478. They will
mail it out to you. There are 13 components in the DB9 connector in the
OPC-478

Gary

1049. ICOM R2, R10 PC Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <5o4n4.2162$p01.57754@bgtnsc05-news.ops.worldnet.att.net>
Source record: 63504

Does anyone know how to build a programming cable to connect between a PC and the ICOM wideband receivers? I would rather "homebrew" my own rather than spend $40.
Al

1050. 50 MHz DX Bulletin - issue #00-005

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: OZ6OM <obm@image.dk>
Message-ID: <Qy5n4.1138$E4.28565@news020.image.dk>
Source record: 63505
Cross-posted to: rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Dr OM/YL

This mail to inform interested that the latest
edition of the OZ50MHz DX Bulletin #00-005 is now
uploaded at my website, at the adress;

http://www.qsl.net/oz6om/

Please have in mind that the OZ50MHz DX Bulletin
usually is uploaded late Saturday evening (UT time)

vy 73 de OZ6OM / OZ7M "Matt"

1051. Re: ICOM R2, R10 PC Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <MX6n4.2423$p01.65946@bgtnsc05-news.ops.worldnet.att.net>
Source record: 63506

Thanks for the info Gary,
I was not aware that the cable assembly has components other than 2 plug connectors and a cable.
Al

gfiber wrote in message <389CEA8E.12160935@cmc.net>...
>"Al, N2NKB" wrote:
>>
>> Does anyone know how to build a programming cable to connect between a PC and
>> the ICOM wideband receivers? I would rather "homebrew" my own rather
>> than spend $40.
>> Al
>send an email to icomtech@compuserve.com. Include either a fax number or
>snail mail address and request a schematic for the OPC-478. They will
>mail it out to you. There are 13 components in the DB9 connector in the
>OPC-478
>
>Gary

1052. variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: ipas michael <ipas.m@netclic.fr>
Message-ID: <01bf70a0$6fa49ac0$4b371bd4@mm>
Source record: 63507

hi
i would like to buy variable capacitors , one :14 to 240 pf and one :80 to
870 pf
in high voltage , this is for the tuning of an amplifier that i m
homebrewing
thank' s a lot

please write to my e-mail
ipas.m@netclic.fr

1053. Re: 50-100 Mhz receiver?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: Matt <mattj@flashmail.com>
Message-ID: <389D8263.31E63BB2@flashmail.com>
Source record: 63508

Thanks for that info.

Would it be possible to tap one of the pins 8,9, or 10 of a philips tda7000
Ic (http://www.semiconductors.com/pip/TDA7000_CNV_2), to get just the basic
signal?

Thanks again all,
Matt.

Robin Birch wrote:

> In article <389C1725.A6A03182@flashmail.com>, Matt
> <mattj@flashmail.com> writes
> >Hi all.
> >
> >I'd appreciate any suggestions on how to go about constructing a
> >50-100Mhz receiver, with a direct output ie no demodulation. I want to
> >keep it as simple as possible, though I want to be able to pick up
> >fairly faint signals. Would it be feasible to modify a small FM radio
> >receiver?
> >
> >Thanks,
> >Matt.
> >
> Basically yes,
> It would be easiest if you choose something that has the frequency range
> you want, so lets assume that you have such a beast.
>
> Most receivers only get rid of the received signal at the demodulator at
> the end of the IF stage so at best you can take the output of the last
> IF or maybe the one prior to that. This should give you the received
> signal at the IF frequency, you can the do what you like with it by
> feeding it through a small buffer amplifier and then hanging whatever
> you want off the end.
>
> If you can't get a set that covers these bands then get the closest
> match and you will have to vary the VFO to run over the frequencies that
> you want, this could be cumbersome and complicated but is essentially
> feasible.
>
> Hope this helps
>
> Robin
> ---
> Robin Birch robin@falstaf.demon.co.uk

>
> M1ASU/2E0ARJ/M5ABD Old computers and radios always welcome

1054. Re: RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <3lWcOLzCoXrwpLuQQ3coEJmcgc3v@4ax.com>
Source record: 63509

JGinNY <jgovost1@twcny.rr.com> wrote:

>Got an old tube-type VHF transciever for 50 Mc., circa. 1963 (Lafayette)

>Also connected across the antenna jack is a 1 K ohm resistor.
>Is this part of the TVI trap, or what is the resistor's function?

Between the plate of the tube(s) and the tank circuit there should be a DC blocking cap. The resistor is there to give a 0V DC reference to the RF output, to drain off any static that might be fed in from the antenna, and to blow the B+ fuse in case the DC blocking cap shorts out, otherwise such a failure would cause a safety hazard (live B+ to the antenna and feed line.)

>Note this: At one point, I removed the L/C trap and the resistor from
>the rig. After I did this, the rig would not give _any_ RF output into
>an antenna. Zip. However, if I replaced the 6m antenna with a DUMMY
>LOAD, the RF amp loaded up fine and gave a very good output level. (Why
>would that make any difference?)

Well if exactly the same radio will feed just fine into the dummy load, but not into your antenna, then your antenna and feed line must not look like 50 Ohms. Check them out.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1055. RF signal generator kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <389db6e7.7106283@news.u-net.com>
Source record: 63510

I am looking to construct an RF signal generator, preferably from a kit, but I'm not averse to starting from scratch if someone has a good design. I know of two kits: Ramsey Electronics and Elecktor magazine...are there an others? I am especially interested in a DDS design if anyone knows a good one. Comments appreciated.

Larry Gagnon MW0AWC

1056. Re: ICOM R2, R10 PC Cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <dohr9ssvej8auaodg2th8uqlef0rmop4r4@4ax.com>
Source record: 63511

On Sun, 06 Feb 2000 04:41:16 GMT, "Al, N2NKB"
<n2nkb@n2nkb@postoffice.worldnet.att.net> wrotf:

>Thanks for the info Gary,
>I was not aware that the cable assembly has components other than 2 plug connectors and a
cable.
>Al
>
>gfiber wrote in message <389CEA8E.12160935@cmc.net>...
>>"Al, N2NKB" wrote:
>>>
>>> Does anyone know how to build a programming cable to connect between a PC and
>>> the ICOM wideband receivers? I would rather "homebrew" my own rather
>>> than spend $40.
>>> Al
>>send an email to icomtech@compuserve.com. Include either a fax number or
>>snail mail address and request a schematic for the OPC-478. They will
>>mail it out to you. There are 13 components in the DB9 connector in the
>>OPC-478
>>
>>Gary
>

Yes it has a RS-232 to TTL level converter inside the DB-9.

Gary

1057. Re: Can I use CFS455 with MC3359 ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <389dcb90@news.marun.edu.tr>
Source record: 63512

By the way my second question : Do you know any basic schema
for PLL unit import to NE602N
This receiver will be use our clup repater (2m)
if you help me I`ll be very glad . 73,s TA2AD

Mark Zenier <mzenier@netcom.com> wrote in message
news:87hntm$9jn$1@nntp6.atl.mindspring.net...
> In article <3899fb63@news.marun.edu.tr>, ta2ad <ta2ad@yahoo.com> wrote:
> >I have FR-146 receiver kit from Ramsey .
> >Ramsey used MC3359 Fm receiver IC and NE602
> >I want use CFS455 ceramic filter with MC3359 IC , is this possible ?
> >also I want to use 3 pole helical filter for signal input to NE602 .
> >what is your idea ?
>
> It would help us if you'd have provided some of the details on whatever
> the heck a CFS455 is! (Dig, dig, dig). Looks like you're talking about
> a Murata rectangular can filter. Specs seem ok. The datasheet for the
> '3359 says that the IF filter impedances are in the range of 1.5k to
> 2k ohms. Come to think of it, I've a couple of receivers (a scanner and
> and a "baby monitor") that use the Murata type IF filter with the MC3361.
>
> I did a FM SCA decoder using the '3359 using the Toko HCFM-2455x series
> (where x = A-E or thereabouts) and found that it was fairly tolerant
> and had so much gain that just about anything worked. The Toko parts
> are nice because they're a 3 pin part with .1 inch spacing that matches
> the pinout of the chip and can have very short connections.
>
> The mixer in the chip isn't anything to write home about overload wise,
> (neither is the NE602, reportedly) probably a function of the high gain
> in the whole chip. If you're going for performance, a filter at the
> first IF before the '3359 will get you more improvement than putting
> more bucks in the 455 kHz IF filter.
>
> Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State
resident
>

1058. Re: Powerline operated digital "micro clock" really a LCD watch module

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: The Ronneys <pronney@sprynet.com>
Message-ID: <87koag$lh2$1@nntp2.atl.mindspring.net>
Source record: 63513
Cross-posted to: sci.electronics.design,rec.antiques.radio+phono,rec.radio.amateur.homebrew

My advice is to use two plastic prongs if you insist on plugging in to an AC outlet. Then let the internal battery do its intended function. Change the battery every few years, when needed.

Otherwise, a nail sticking out the back will attach it to a wall, without a wall outlet.

Besides, AC outlets are often (intentionally) placed in inconspicuous places. Not the place to keep a clock.

Martin Ronney

Robert Casey wrote in message <87e421lps1@nntp9.atl.mindspring.net>...
>See the diagram and a picture of it at:
>http://home.netcom.com/~wa2ise/radios/dw117.jpg
>
>It should also operate just fine on 220V and 100V.

1059. Re: variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <389debcd.19162305@news.online.no>
Source record: 63514

On Sun, 06 Feb 2000 12:44:27 GMT, "ipas michael" <ipas.m@netclic.fr>
wrote:

>hi
>i would like to buy variable capacitor :80 to
>870 pf
>in high voltage ,

if it is for a pi-network, the second capacitor hardly need to be
rated for high voltage, or are you doing QROO?

73 jan-martin LA8AK

1060. Re: RF signal generator kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: Paul Breed <Paul@Netburner.com>
Message-ID: <389DF7FF.7FDEA6A4@Netburner.com>
Source record: 63515

Larry Gagnon wrote:
>
> I am looking to construct an RF signal generator, preferably from a
> kit, but I'm not averse to starting from scratch if someone has a good
> design. I know of two kits: Ramsey Electronics and Elecktor
> magazine...are there an others? I am especially interested in a DDS
> design if anyone knows a good one. Comments appreciated.
>
> Larry Gagnon MW0AWC

The latest QEX (Jan iI believe)from arrl has a low phase noise 0->250
mhz DDS controlled signal generator in it. It looks like a nice quality
setup, but it will cost a bit to reproduce.

Paul (Kl7JG)

1061. Re: signal one

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-06 00:00:00 UTC
From: Ron H <rnharsh@visi.com>
Message-ID: <l0pn4.1820$8p3.210426@ptah.visi.com>
Source record: 63516

Paul Kluwe W8ZO at PKluwe@aol.com is your best bet for Signal One Parts. If Paul doesn't have what you need he know where to get it.

73
K3PID
rnharsh@visi.com

1062. wanted information on variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: charlie Lee <chlee1207@hanmail.net>
Message-ID: <87l7pdkio1@nnrp1.deja.com>
Source record: 63517

Hi,

I'd like to buy following variable capacitor made by " COMET "
These variable capacitors are used in RF matching network.

(1) CV05C-1000W/5 , 10 - 1000pF 5KV/3KV

(2) CV1C - 500W/15 , 12-500pF 15KV/9KV

Since I'm not familiar with variable capacitor , I don't understand the
above spec. I'd like to know where I can buy this .

I apprecaite your information so much.

Charlie Lee

Sent via Deja.com http://www.deja.com/
Before you buy.

1063. Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <389E6F54.D9B8E32D@juno.com>
Source record: 63518

Hi, I have a Fluke 87 (about 8years old). When I went to use it today it gave me a value of 1 volt dc with the leads shorted. Also the leftmost digit flickers between 1 and 0 on all settings except Ohms.

Any suggestions? Anyone have a schematic or know where I can get more info? Thanks a bunch, Art.

1064. Re: wanted information on variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <87mcht$di4$1@nnrp1.deja.com>
Source record: 63519

In article <87l7pdkio1@nnrp1.deja.com>,
charlie Lee <chlee1207@hanmail.net> wrote:
> Hi,
>
> I'd like to buy following variable capacitor made by " COMET "
> These variable capacitors are used in RF matching network.
>
> (1) CV05C-1000W/5 , 10 - 1000pF 5KV/3KV
>
> (2) CV1C - 500W/15 , 12-500pF 15KV/9KV
>
> Since I'm not familiar with variable capacitor , I don't understand
the
> above spec. I'd like to know where I can buy this .
>
> I apprecaite your information so much.
>
> Charlie Lee
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.
>

Try Richardson at http://www.rell.com/
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1065. Re: variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: seca4all <seca4all@altern.org>
Message-ID: <ksAn4.811$gg.5261435@nnrp1.proxad.net>
Source record: 63520

hi
thank's to answer me.
effectively the second capacitor don't have to support a so high voltage
than the first one.
For information i m trying to do a 1,5 kw amplifier with a 4cx1600B tube
michael
J M Noeding a ?crit dans le message <389debcd.19162305@news.online.no>...
>On Sun, 06 Feb 2000 12:44:27 GMT, "ipas michael" <ipas.m@netclic.fr>
>wrote:
>
>>hi
>>i would like to buy variable capacitor :80 to
>>870 pf
>>in high voltage ,
>
>if it is for a pi-network, the second capacitor hardly need to be
>rated for high voltage, or are you doing QROO?
>
>73 jan-martin LA8AK
>

1066. Re: RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Bert Douglas <bertdNOSPAM@bellsouth.net>
Message-ID: <ZHAn4.3577$RT4.69222@news3.mia>
Source record: 63521

Jim Adney wrote in message <3lWcOLzCoXrwpLuQQ3coEJmcgc3v@4ax.com>...
>JGinNY <jgovost1@twcny.rr.com> wrote:
>
>Well if exactly the same radio will feed just fine into the dummy
>load, but not into your antenna, then your antenna and feed line must
>not look like 50 Ohms. Check them out.

Assume the antenna is 50 ohms at RF, but an open circuit at DC.
The dummy load is probably just a resistor, and is 50 ohms at both RF and DC.

So it seems likely that the DC path is necessary for proper operation.

Bert Douglas

1067. Tubes needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: john <jdm@iland.net>
Message-ID: <389F0718.9B05620E@iland.net>
Source record: 63522

I am in need of a 6GU5 and a 6BZ6 tube. Email direct with costs plus shipping to 65301. Thanks

1068. Re: variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <389efbb8.88368288@news.online.no>
Source record: 63523

On Mon, 07 Feb 2000 14:15:44 GMT, "seca4all" <seca4all@altern.org>
wrote:

>hi
>thank's to answer me.
>effectively the second capacitor don't have to support a so high voltage
>than the first one.
>For information i m trying to do a 1,5 kw amplifier with a 4cx1600B tube

with 3kV anode supply?
>

1069. Re: signal one

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <389efbfc.88437006@news.online.no>
Source record: 63524

On Sun, 6 Feb 2000 19:15:46 -0600, "Ron H" <rnharsh@visi.com> wrote:

>Paul Kluwe W8ZO at PKluwe@aol.com is your best bet for Signal One Parts. If
>Paul doesn't have what you need he know where to get it.
>
>73
>K3PID
>rnharsh@visi.com
>
>
By the way, how good is CX-7? Was it really worth the price? A have
only the folder, but believe it was a heavy documentation for it....
like HRO-500 in this respect

73 Jan-Martin
LA8AK

1070. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Sam Brutcher <sbrutcher@fallschurch.esys.com>
Message-ID: <87n3m5$epa5@fcserv3.fcd.esys.com>
Source record: 63525

I tried Ramsey kits when I first got my license. They're well-packaged and easy to build, with very clear instruction manuals. Also relatively cheap.

Specifically, I thought I'd get started with their 40m DC receiver kit and 40m transmitter. The transmitter worked great, but I never did get the receiver running properly. Now I'm not sure DC is the way to go for a beginner. I ended up getting a 30m superhet kit from the Small Parts Center (now defunct) along with a multi-band module for 40, 15, and 10 meters. It worked perfectly the first time, and this was only my third kit!

Then I picked up a Ramsey keyer and "touch-control" paddle kit at a hamfest. The keyer worked - sort of. The paddle gizmo - which used two pieces of copper-clad in lieu of moveable paddles - was totally useless. I ended up getting a used keyer and paddles at a local ham shop. Perfect.

Later, for some reason, I tried out the Ramsey low-power FM transmitter. It worked as advertised, but the older version I had was really unstable. Very bad frequency drift.

My last experience with a Ramsey kit was their Van de Graaf generator. Not recommended. It works - sort of.

Generally, I've had much better luck with a mixture of kits from other manufacturers and used components. Ramsey kits are fun for a beginner to play around with, but I would NOT recommend them as reliable, full-time amateur radio equipment. If you have kids or ARE a kid, go for it. Otherwise, I'd suggest Ten-Tec, Dan's Small Parts, Kanga, and other QRP kit manufacturers. Their kits are of much higher quality and usually work better. Just search the internet for "QRP" and see what you can come up with.

Good luck!

SB

Keith Wood <kw@bctv.com> wrote in message news:3894A904.D3145ABA@bctv.com...
>
>
> Tim Seguin wrote:
> >
> > (Additional) I just got my license, and I'm looking for a low budget
entry
> > into ham radio. I saw the Ramsey kits ad on their web site, but I've
heard
> > some bad things from the local hams about their kits. Has anyone out
there
> > had any experience with Ramsey kits, or Ten-Tec's kits.

>
> If you can be safely let loose with a soldering iron, the kits are
> interesting and educational. You will get more bang from your buck
> buying a used rig, but you will be a better ham if you build radios
> instead of just being an "appliance operator."

1071. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <1dFn4.15487$OI1.472117@news5.giganews.com>
Source record: 63526

Go to the Fluke web site and request information there. But I am guessing it's not worth repairing; it's possible that the main integrated circuit has failed.

On the other hand, there is a fuse/resistor to protect the input. If that opens you might get symptoms such as you indicate. Fluke also has a toll free number for technical support and they might steer you to a fix.

73, Bob K6DDX

1072. Re: Broadband VHF frequency doubler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <389f3f0c@news.marun.edu.tr>
Source record: 63527

Hi
What can I make import PLL to NE602
if you send me any circuit to my e-mail I`ll be very glad .
I am makeing modify a RAMSEY kir FR-146 'm receiver
for Our clup repeater , so I need circuit PLL import to NE602
also I want to use 2 and 3 pole helical resanator for antenna input .

73`s de TA2AD

<aaa@bbb.com> wrote in message news:389AB3EF.3708CB6D@bbb.com...
> hi,
>
> Iwas planning on building a VCO using a NE602 as VCO + doubler.
> Ne602 will certainly operate at this freq, and there is a phillips appnote
> that covers the use of NE602 as a doubler.
>
>
>
>
>
> Roger lascelles wrote:

1073. Re: Rx Multicoupler

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000207170331.18964.00000670@ng-cs1.aol.com>
Source record: 63528

Most multicouplers I have seen pretty much suck bilge water as far as I am concerned. By there nature they have to be broad banded are a poor substitute for the front end of most decently designed receivers. I understand that you have to do what you have to do and the multicouplers may be your answer but perhaps you may want to consider other alternatives such as separate antennas or just a passive splitter.

1074. KE5FX page updated w/homebrew tracking-generator info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <389F4F1E.FD7@pop.removethistomailme.net>
Source record: 63529

Anyone running a Tek 490-, 2700-, or 7L-series spectrum analyzer may wish to check http://www.qsl.net/ke5fx/tr503.html. I've just finished updating the page with details on a relatively-inexpensive tracking generator project covering near DC to 1.8 GHz.

The design is somewhat dependent on having a well-stocked junk box, but there's a lot of room for flexibility in component selection. As with everything else on the site, comments and feedback are always appreciated...

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1075. Re: Instant Lettering for Panels etc?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Stew <wb6eysNOwbSPAM@netzero.net.invalid>
Message-ID: <19395994.2dd5ddb5@usw-ex0107-050.remarq.com>
Source record: 63530

Hi . Stew here .

I have an actual ENGRAVING machine used for Electronic Instruments .
Many accessories and tooling .

If you would be interested in it . Being offered for a VERY reasonable
price . I don't plan to use this equip. and therefore will offer it at
way below it's actual value .

Contact: Stew wb6eys@juno.com

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

1076. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <427-389F6930-30@storefull-128.iap.bryant.webtv.net>
Source record: 63531

A "GOOD" RADIO DOESN'T HAVE SPURS OR REQUIRE TECH SUPPORT OR
REPLACEMENTS FOR MISSING PARTS. ASSEMBLING A KIT DOES NOT SUDDENLY MAKE
YOU A GOOD HAM EITHER.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

1077. Need info on LV2105 PLL....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Paul Breed <Paul@Netburner.com>
Message-ID: <389F7407.78DD5F51@Netburner.com>
Source record: 63532

I'm trying to modify one of the microsocpic Alinco
receivers to be computer controlled.

It has a PLL chip that is called a LV2105V1

Any idea on who makes it and where I could get a data sheet?

Paul (Kl7JG)

1078. Re: RF Tank Circuit Question -- old VHF rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <t4ufOGs+sBeWsr4A2NWwKKEUqasz@4ax.com>
Source record: 63533

"Bert Douglas" <bertdNOSPAM@bellsouth.net> wrote:

>
>Jim Adney wrote in message <3lWcOLzCoXrwpLuQQ3coEJmcgc3v@4ax.com>...
>>JGinNY <jgovost1@twcny.rr.com> wrote:
>>
>>Well if exactly the same radio will feed just fine into the dummy
>>load, but not into your antenna, then your antenna and feed line must
>>not look like 50 Ohms. Check them out.
>
>
>Assume the antenna is 50 ohms at RF, but an open circuit at DC.
>The dummy load is probably just a resistor, and is 50 ohms at both RF and DC.

If the DC blocking cap was leaky, and this led to the final tank and
antenna charging up to high voltage and arcing over, then the loading
would indeed be impossible while something was arcing.

Other than that, any DC voltage is irrelevant to the RF matching.
-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

1079. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: Marvin Born <mborn@wbns.com>
Message-ID: <389F9837.9066BA4B@wbns.com>
Source record: 63534

Replace the batteries and check the fuse. Other than that, send it back
to Fluke.

They have a Web site and Fluke has excellent product service. I have sent
several meters back and normally they are quick and reasonable in repairs.

K8XU

A Jury wrote:

> Hi, I have a Fluke 87 (about 8years old). When I went to use it today
> it gave me a value of 1 volt dc with the leads shorted. Also the
> leftmost digit flickers between 1 and 0 on all settings except Ohms.
>
> Any suggestions? Anyone have a schematic or know where I can get more
> info? Thanks a bunch, Art.

1080. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-07 00:00:00 UTC
From: ma_locksmith <ma_locksmith@email.msn.com>
Message-ID: <#WvDo4bc$GA.223@cpmsnbbsa03>
Source record: 63535

Did you change the battery?

"A Jury" <gdbear1@juno.com> wrote in message
news:389E6F54.D9B8E32D@juno.com...
> Hi, I have a Fluke 87 (about 8years old). When I went to use it today
> it gave me a value of 1 volt dc with the leads shorted. Also the
> leftmost digit flickers between 1 and 0 on all settings except Ohms.
>
> Any suggestions? Anyone have a schematic or know where I can get more
> info? Thanks a bunch, Art.

1081. Re: filter design programs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <pi1o4.133$LC4.2729@bgtnsc04-news.ops.worldnet.att.net>
Source record: 63395

Go to www.aade.com; Niel Heckt has a very good program, that will not only do what you need, but it will also synthesize filters that have unequal input and output impedances. I have used his program for about a year, and it has been great! You get to use 10 times, before you have to make a decision to purchase it for about 30 dollars. Give it a shot, and you will not be dissapointed.

Pete Gianakopoulos

<stopack00@my-deja.com> wrote in message news:87pdfjlah1@nnrp1.deja.com...
> Does anyone know of shareware rf filter design programs?
>
> I need a program that can do band-pass, cheb, high pass, low pass etc
> for lumped element designs from about 1MHz through about 0.5GHz
>
> I had a couple programs that worked well that I got from RF design,
> about 8 yrs ago. I have misplaced the 5 1/2" floppies. They were
> excellent.
>
> Thanks
>
> Steve
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1082. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: maddog@io.com
Message-ID: <389f82dc.220902425@news.io.com>
Source record: 63536

On Mon, 07 Feb 2000 07:00:23 GMT, A Jury <gdbear1@juno.com> wrote:

>Hi, I have a Fluke 87 (about 8years old). When I went to use it today
>it gave me a value of 1 volt dc with the leads shorted. Also the
>leftmost digit flickers between 1 and 0 on all settings except Ohms.
>
>Any suggestions? Anyone have a schematic or know where I can get more
>info? Thanks a bunch, Art.

I'm assuming you changed the battery, and checked the fuses inside...

Have you contacted Fluke? My 87 had a malfunction about two years ago (eating batteries like crazy), and when I submitted it to the Fluke Service Center in Dallas for repair, they allowed as how their equipment is now waranted for life. They repaired it by swapping out the main board, placed a NIST-traceable calibration sticker on it, all free except shipping.

Worth a call...

Good luck,
monty N5FC

1083. OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <389F628D.94EBC9FD@lafn.org>
Source record: 63537

Hi,

Can you folks identify a low cost CAD software I can
use to make general mechanical drawings, QRP cabinet layouts,
ALTOID Tin layouts, lawn layouts, etc?

Shareware would be the best but do not limit recommendations.

Thanks and 73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1084. Re: variable capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: seca4all <seca4all@altern.org>
Message-ID: <evPn4.1148$5M2.7173179@nnrp1.proxad.net>
Source record: 63538

with exactly 2.4 kv anode supply
J M Noeding a &#65533;crit dans le message <389efbb8.88368288@news.online.no>...
>On Mon, 07 Feb 2000 14:15:44 GMT, "seca4all" <seca4all@altern.org>
>wrote:
>
>>hi
>>thank's to answer me.
>>effectively the second capacitor don't have to support a so high voltage
>>than the first one.
>>For information i m trying to do a 1,5 kw amplifier with a 4cx1600B tube
>
>with 3kV anode supply?
>>
>

1085. NEED INFO ABOUT EIMAC 8930 TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: seca4all <seca4all@altern.org>
Message-ID: <9RQn4.95$ID3.881758@nnrp3.proxad.net>
Source record: 63539

Hi every body
I' need some information about the vacuum tube Eimac 8930,
plate voltage , grid bias voltage ... schematics ..all that you know can
help me so please write me to
ipas.m@netclic.fr

1086. filter design programs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: stopack00@my-deja.com
Message-ID: <87pdfjlah1@nnrp1.deja.com>
Source record: 63540

Does anyone know of shareware rf filter design programs?

I need a program that can do band-pass, cheb, high pass, low pass etc
for lumped element designs from about 1MHz through about 0.5GHz

I had a couple programs that worked well that I got from RF design,
about 8 yrs ago. I have misplaced the 5 1/2" floppies. They were
excellent.

Thanks

Steve

Sent via Deja.com http://www.deja.com/
Before you buy.

1087. Re: NEED INFO ABOUT EIMAC 8930 TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <87pgcpnoh1@nnrp1.deja.com>
Source record: 63541

In article <9RQn4.95$lD3.881758@nnrp3.proxad.net>,
"seca4all" <seca4all@altern.org> wrote:
> Hi every body
> I' need some information about the vacuum tube Eimac 8930,
> plate voltage , grid bias voltage ... schematics ..all that you know
can
> help me so please write me to
> ipas.m@netclic.fr
>
>

Enter http://www.eimac.com/catalog/16485.htm
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1088. 2.4 Ghz Wavecom

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: dan <dan1@otenet.gr>
Message-ID: <38A0406E.37905278@otenet.gr>
Source record: 63542

Dear Gentlemen:

I have this little system, and I want to put it a 5/8 element.
Does anyone know what is going to be the matching device for best performance?
And is there any general formula function of frequency, that is going to

give me Henrys and/or Farads for this?
Thanks.

1089. Re: Ham-Homebrew Digest V2000 #28

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <87pjiv$6cp$1@nntp2.atl.mindspring.net>
Source record: 63543

In article <LPBBIKEILCIGCOFBPPPFGEIJCBAA.fneal@colossus.org>,
Frank R. Neal <fneal@colossus.ORG> wrote:
>Spammer

Oh, get a clue. You're bitching to an automated mail list gateway.

The amateur radio newsgroups have always been gatewayed back and forth across to their mailing list equivalents. Sometimes there's a problem when a mail server bounces a message for some recipient that's no longer there or has other problems. Some people can't get the newsgroups, so e-mail is the only way they can particpate. These mailing lists have been around since the Arpanet days, which makes these groups/lists some of the longest running discussion groups around.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1090. Homebrew stuff for the disabled, senior ham...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-08 00:00:00 UTC
From: Notch-Filter@webtv.net
Message-ID: <8462-38A09256-37@storefull-136.iap.bryant.webtv.net>
Source record: 63544

These products started out as a way to offer homebrew projects to the disabled and senior citizen ham who wasn't able to "roll their own". Since then, many people have purchased the devices because of their uniqueness and inexpensive price.

To see further descriptions and photos of the active antenna, antenna tuner, QRP transmitter and more, please visit:

http://qth.com/dwm

73, Bill

Is there a DANGER ON THE INTERNET??
To find out, visit:
http://qth.com/dwm/publications.htm

1091. Re: RF signal generator kits?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: Alan Matheson <hokianga@ihug.co.nz>
Message-ID: <87pulspol1@news.ihug.co.nz>
Source record: 63396

From memory Analog Devices had demo boards for a DDS synthesizer that was
controlled from a parallel port on the PC.
Alan matheson

Paul Breed <Paul@Netburner.com> wrote in message
news:389DF7FF.7FDEA6A4@Netburner.com...
>
>
> Larry Gagnon wrote:
> >
> > I am looking to construct an RF signal generator, preferably from a
> > kit, but I'm not averse to starting from scratch if someone has a good
> > design. I know of two kits: Ramsey Electronics and Elecktor
> > magazine...are there an others? I am especially interested in a DDS
> > design if anyone knows a good one. Comments appreciated.
> >
> > Larry Gagnon MW0AWC
>
> The latest QEX (Jan iI believe)from arrl has a low phase noise 0->250
> mhz DDS controlled signal generator in it. It looks like a nice quality
> setup, but it will cost a bit to reproduce.
>
> Paul (Kl7JG)

1092. Re: Tubes needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <87qc6acgv1@nnrp1.deja.com>
Source record: 63397

In article <389F0718.9B05620E@iland.net>,
john <jdm@iland.net> wrote:
> I am in need of a 6GU5 and a 6BZ6 tube. Email direct with costs plus
> shipping to 65301. Thanks
>

6GU5 can be found at http://www.tubeworld.com/tubes.html
and both tubes are found at http://www.vacuumtubes.net/price2.html
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1093. Vectronics PS30F Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <2p2o4.13682$ri.318193@news20.bellglobal.com>
Source record: 63398
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am looking for a schematic for a Vectronics PS30F power supply. Can anyone help me please?

VO1BIL
Bill

1094. 9-pin Octal-type socket needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: bnewberg@winstead.com
Message-ID: <J%2o4.17574$OI1.551032@news5.giganews.com>
Source record: 63399

The subject line says it all. This socket is used on the power cable for Collins 51S1 receiver. I don't know if it was otherwise a production item.

Please reply by e-mail to bnewberg@winstead.com.

Thanks,

Barry Newberger

1095. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <o14o4.355$UP1.9151@bgtnsc05-news.ops.worldnet.att.net>
Source record: 63400

While you are replacing the batteries, connect a clip lead across the
meter's battery leads with the batteries vacant. This may help to discharge
electrolytic caps that may keep enough voltage on the uP that keep it insane.
I have used this trick successfully several times with consumer goods.
Al

Marvin Born wrote in message <389F9837.9066BA4B@wbns.com>...
>Replace the batteries and check the fuse. Other than that, send it back
>to Fluke.
>
>They have a Web site and Fluke has excellent product service. I have sent
>several meters back and normally they are quick and reasonable in repairs.
>
>K8XU
>
>A Jury wrote:
>
>> Hi, I have a Fluke 87 (about 8years old). When I went to use it today
>> it gave me a value of 1 volt dc with the leads shorted. Also the
>> leftmost digit flickers between 1 and 0 on all settings except Ohms.
>>
>> Any suggestions? Anyone have a schematic or know where I can get more
>> info? Thanks a bunch, Art.
>

1096. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <l44o4.363$UP1.9892@bgtnsc05-news.ops.worldnet.att.net>
Source record: 63401

I built a shortwave receiver kit from Ramsey. It worked well, although it intentionally did not
have any image rejection for simplification. Therefore, the receive signal shows up on two different places
"on the dial".
Al

1097. 2M solid state help .. ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: Zack Miller <kb3cji@home.com>
Message-ID: <38A05A0C.B0A99968@home.com>
Source record: 63402

Looking for info on building a 500+ watt 2m SSB amp...

Thank you

Zack, KB3CJI

1098. Skirted knobs needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: stevem <wb9tow@egr.msu.edu>
Message-ID: <38A16F62.DFD25195@egr.msu.edu>
Source record: 63403

I am in need of 2 knobs for my HB 812 rig. ANY matching pair
with 0-100 dial skirts, approx 2 1/2 to 3 " diameter will do.
The old Crow, National, Millen, Bud, or Johnson would be great!
Let me know price or what you might need in trade, I have a
few extra TVL B&W coils to temp someone!
vri 73 steve
w8tow

1099. Vectronics vec1294k tv xmtr?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: af801@FreeNet.Carleton.CA
Message-ID: <87s2ck$9kb$1@freenet9.carleton.ca>
Source record: 63404

Hello All
Has anyone built this kit?.
Are there any mods to make it better?
And does anyone know the impedance of the antenna?
I would like to mount the antenna outside using a cable.
Thanks in advance.....ttyl

1100. WTB LOCTAL SOCKETS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <7584-38A18F55-6@storefull-127.iap.bryant.webtv.net>
Source record: 63405

MY PREVIOUS POST BROUGHT NO RESPONSE. PLEASE, PRETTY PLEASE, PLEASE WITH SUGAR ON IT. I NEED ABOUT 20. IF YOU HAVE ONLY A COUPLE I WOULD APPRECIATE THEM. $1.00 EACH PLUS SHIPPING.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

1101. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: jstrohm@texas.net
Message-ID: <87se6t$pq3$1@nnrp1.deja.com>
Source record: 63406

In article <389E6F54.D9B8E32D@juno.com>,
gdbear1@juno.com wrote:
> Hi, I have a Fluke 87 (about 8years old).

[symptoms deleted]

Send it to Fluke, and they will fix it. The meter has a lifetime warranty, and repairs are free unless you obviously abused it -- I had to pay for my Fluke 77 repairs after I put a non-current-limited 1500VAC across it. But the repairs were a lot cheaper than a replacement.

If you find a used but busted Fluke meter for cheap, it might be worth your time to buy it and send it to Fluke for repair. A lot of owners don't know this.

Jim

Sent via Deja.com http://www.deja.com/
Before you buy.

1102. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: al <kc4sbjNOkcSPAM@hotmail.com.invalid>
Message-ID: <0a288596.6efe2d0d@usw-ex0107-050.remarq.com>
Source record: 63407

for what you would pay for a ramsey hit you can buy a tentec kit i have had both and the tentec is a better kit not only that tech support for ramsey (1 to 10)is about a 3, on the other hand tentec is about a 8. I wouldn't go with a ramsey in my own words ramsey is made from jumk (mfj) Ramsey 2 meter kits is about 100.00 give or take a few $ A TENTEC is only a few dollors more. tentec you get a led read out (frz.) ramsey you don't,tentec you get mem....ch. without reprogramming the rig ramsey you don't, tentec you get 10wts. or 25wts. or both, ramsey you only get 5 watts.with a few more $ you get a hold lot more for the money going with tentec and a real good tech support, with ramsey don't even try to talk to tech support i thank they are asshold!!!
In article <AVOk4.845$dq3.49410@news.corecomm.net>, "Tim Seguin" <tatraweb@core.com> wrote:
> I see Ramsey marked down their FX series 2m, 440, and 6m kits.
> Are they a
> good deal or a waste of money?

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

1103. Re: Help! How do I test coax to see if it's damaged?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: "G.Scott" <g.scott@cableinet.co.uk>
Message-ID: <38A0D70B.35F802EA@cableinet.co.uk>
Source record: 63408
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Hey Grant, a good rule of thumb method of testing your coax is to put a signal down it into a dummy load and run a field strength meter along it , any breaks in the shielding etc will show up instantly!

Grant Hopper wrote:

> I have several lengths of coax (some RG-58, belden 8237, and RG 213) that
> have had uncertian histories. At least one of the lengths has spent
> several days under water (fresh and salt) however all of them are clean so
> visual inspection has not been conclusive. I'd like to find the bad ones
> since several of the lengths are reported to be fine and they are from 25
> feet to almost 100 feet long.
>
> I have a good watt meter (a bird 43), a good dummy load (to 1000 MHz) and
> HF and vhf rigs but nothing like a signal generator.
>
> Any advice on this topic would be appreciated, even if it's just a
> reference to an article in QST or other publication.
>
> Thanks.
>
> Grant Hopper
> KB7WSD
>
> --
> G.F. Hopper
> KB7WSD
>
> "Remember, you can always quit before it gets really bad."
> -

1104. Viz microsonde units ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: "Keith E. Spainhour" <KSpainhour@wilkes.net>
Message-ID: <38A217D6.F2DBEBB9@wilkes.net>
Source record: 63409

Hello,
I recently bought some Viz Microsonde II radiosonde units.
Does anybody have any info. on these units, data formats,
schematics,??? I have found a few basics on the web, but
nothing technical. Any help would be appreciated.

--
73 DE KT4XW
Keith Spainhour
KSpainhour@wilkes.net

1105. Midland 70-340B VHF 2m convertion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <87sj3v$25j$1@bbs.aeminium.pt>
Source record: 63410

Hello,
i have one of these radios a friend of mine gave me
a couple of years ago and now i'm planning to convert it to 2m
operation.

I searched the net and found at

http://www.morgan2.demon.co.uk/files.html

a program called midland.zip which enables you to program the
27C16 EPROM of this radio. Does it work fine? I need to
desolder the EPROM, that i'm planning to do it today, and
searched the net for the radio IC's with not much luck...

Any of you done the same? Tips, ideas, max channels allowed,
frequency range, max power, etc are welcome! The radio
schematic would be great, do you know were can i find it?
I couldn't find the Midland HomePage!

Thank you,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

1106. 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-09 00:00:00 UTC
From: Michael Tracy <kc1sx@arrl.org>
Message-ID: <KZzo4.11$UT2.6907@news.ntplx.net>
Source record: 63411

Does anyone know of a source for 7-segment LCDs? Multiple digits are fine, I just don't want to be bothered with the extra baggage dot matrix displays involve. I would also prefer to not rip apart an existing device (such as a clock) because I want to have a project others can duplicate.

I will fall back to LEDs if need be, but would prefer a source for LCDs. So far, I've looked through every catalog and web page I could find with no luck. All the 7-seg LCDs come wrapped up as panel meters, up counters, etc.

I could use an up/dn counter too (that's what I really want anyway), but nobody seems to make any of those either.

Thanks and 73, Michael Tracy, KC1SX
mtracy@arrl.org

1107. L.O.S.A Contribution Form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: cjX@hth.com
Message-ID: <38a20285.16640028@news.sverige.net>
Source record: 63412
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

```
List Of Stamp Applications (L.O.S.A for short)
==============================================

If you have done something (big or small) with the BASIC Stamp
that you are willing to tell others please use the form below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Then e-mail the form to:

cj@hth.com

With the following as the subject:

L.O.S.A Contribution

Or you could point your Web-browser to the following URL and fill
in the L.O.S.A form on the Web-page...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###

http://www.hth.com/losa/

The latest version of L.O.S.A is always available at the above
mentioned both in ASCII and in ZIP-file format for easy download.
An index of L.O.S.A is posted to the following mailing lists and
news groups, I will update it approx. once a month.

Mailing lists:

BASIC Stamp Mailing List

News groups:

comp.robotics.misc
comp.home.automation
sci.electronics
sci.electronics.misc
rec.radio.amateur.homebrew

FTP-site:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

You can also find the latest version on the following URL...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###
```

http://www.hth.com/losa/

[--- cut ---]

```
========================================================================
- L.O.S.A Contribution Form -
========================================================================
New Contribution [ ] Update [ ]
------------------------------------------------------------------------

Title :
Author: Date:

E-mail: (optional)
------------------------------------------------------------------------

Stamp model : BASIC Stamp/BS1-IC/BS2-IC/BS2SX-IC
Code available: YES/NO
Filename : (optional)
URL : (optional)
------------------------------------------------------------------------
Description : (5-50 rows describing your application)

========================================================================
```

[--- cut ---]

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

```
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
```

1108. Re: WTB LOCTAL SOCKETS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <87u56n$2c6$1@nnrp1.deja.com>
Source record: 63413

In article <7584-38A18F55-6@storefull-127.iap.bryant.webtv.net>,
dialcover@webtv.net (Bill Turner) wrote:
> MY PREVIOUS POST BROUGHT NO RESPONSE. PLEASE, PRETTY PLEASE, PLEASE
WITH
> SUGAR ON IT. I NEED ABOUT 20. IF YOU HAVE ONLY A COUPLE I WOULD
> APPRECIATE THEM. $1.00 EACH PLUS SHIPPING.
>
> disregard caps, visual problem
> Bill Turner WA0ABI
> 1117 Pike Street
> Saint Charles, MO 63301
> 636-949-2210
>
>

Try http://www.vacuumtubes.com/tubeskt.html
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1109. 6M QRP SSB Transceiver Kit ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Luis Martins <luis.martins@ruido-visual.pt>
Message-ID: <38A2C131.DE34CEF0@ruido-visual.pt>
Source record: 63414

hi! all,

do you know of any good, reliable, usable, kit for a qrp transceiver for
six ?
must have ssb ;)

many tnx,
luis

1110. Printed Circuit Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38A2C6AF.FB4D1E3B@lafn.org>
Source record: 63415

A friend is looking for design info to make printed circuit inductors.

He asks "How practical is this technique for manufacturerd product where
repeatability is important"?

Need a pointer to papers or text. First inductor would be 0.16 uH.
Interested in what Q, fequency stability, microphonics, which pcboard
material is needed. Application frequency was not provided.
So assume FM band, 88-108 mhz.....just to identify stability issues.
73, and thanks, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1111. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: "Robert <DC6XS> Eckelmann" <robert.eckelmann@netsurf.de>
Message-ID: <38A2CEC5.17034DC@netsurf.de>
Source record: 63416

Hello!
This is an international newsgroup so please use the english language
here..

73 de dc6xs Robert

BTW: try www.icom.com or www.javaradio.com

1112. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Siegfried Rambaum <siram@lightlink.com>
Message-ID: <Pine.GSU.4.10.10002101023190.22963-100000@adore.lightlink.com>
Source record: 63417

> This is an international newsgroup so please use the english language
> here..
>
> 73 de dc6xs Robert

Lies Deine Bemerkung noch einmal und denk drueber nach, ob

"international" = "Englisch" ???

Gerade wenn es sich um internationale Gruppen handelt, sind andere
Sprachen zulaessig....

73 de KB2YVC in FN12rj

1113. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <38A2E275.2781E494@my-deja.com>
Source record: 63418

Michael Tracy wrote:
>
> Does anyone know of a source for 7-segment LCDs? Multiple digits
> are fine, I just don't want to be bothered with the extra baggage
> dot matrix displays involve. I would also prefer to not rip
> apart an existing device (such as a clock) because I want to
> have a project others can duplicate.
>
> I will fall back to LEDs if need be, but would prefer a source
> for LCDs. So far, I've looked through every catalog and web
> page I could find with no luck. All the 7-seg LCDs come wrapped
> up as panel meters, up counters, etc.
>

You may want to try "http://www.allied.avnet.com". They have
7-segment LCD panel displays in a variety of configurations,
from 2 to 8 digits. The manufacturer is AND and is on page 632.
I did a search as follows:

Search Criteria: LCD
Search Scope: Part Description
Limit & Refine Search: LCDs, LEDs, Lamps & Sockets

You shoud get about 77 hits and you will have to scroll through
the pages. The part number for the 7-segment devices starts
with "FE".

> I could use an up/dn counter too (that's what I really want
> anyway), but nobody seems to make any of those either.
>

You didn't say whether you want a binary or BCD counter or
what technology (ls, hct, ac, cmos, etc.). The most common up/dn
counter, that I know of is the 74ls191, but that's a binary
counter.

Fairchild makes a CD4029BCN Up/Down counter that is Binary/BCD.

TI has a CD74HC192E Synchronous BCD Decade Up/Down Counter

There are several more, all accessable from the same web address
mentioned above. I just did a "Part Description" search using
"Up/Down Counter".

> Thanks and 73, Michael Tracy, KC1SX
> mtracy@arrl.org

Good Luck
Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

1114. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Luis Martins <luis.martins@ruido-visual.pt>
Message-ID: <38A2E855.FADE03FF@ruido-visual.pt>
Source record: 63419

hi! michael,
you can buy 7 segment lcd displays from maplin electronics www.maplin.co.uk
they have a few models to choose from.

hope this helps.

luis

Michael Tracy wrote:

> Does anyone know of a source for 7-segment LCDs? Multiple digits are fine, I
> just don't want to be bothered with the extra baggage dot matrix displays
> involve. I would also prefer to not rip apart an existing device (such as a
> clock) because I want to have a project others can duplicate.
>
> I will fall back to LEDs if need be, but would prefer a source for LCDs. So
> far, I've looked through every catalog and web page I could find with no luck.
> All the 7-seg LCDs come wrapped up as panel meters, up counters, etc.
>
> I could use an up/dn counter too (that's what I really want anyway), but
> nobody seems to make any of those either.
>
> Thanks and 73, Michael Tracy, KC1SX
> mtracy@arrl.org

1115. Re: Printed Circuit Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <YWBo4.1162$Cn1.31247@news5.giganews.com>
Source record: 63420

Dave, the first knowledge I have of use of PC inductors was in the Tektronix 453 oscilloscope. I have one of those but am loath to open it since it works great.

Stability? Well I think it's pretty much limited by the temperature coefficients of expansion of the materials, so that a proper proportioning of the inductor could result in good stability. In other words, an increase in size would result in no change of inductance. You might have to be clever to accomplish it.

This assumes the materials are isotropic, pretty reasonable for stuff like epoxy filled fiberglass.

Do outfits like Coilcraft make PC inductors, or are they limited to wire designs?

See Terman's handbook for inductance of a straight wire; there is a graph. You can see how wire diameter and length affect inductance, and thus there is probably a ratio of the two that would maintain a constant value over a reasonable range of temperature. Probably some playing around with terminations would have a lot of effect too.

I wish I had some practical experience to share but I don't.

73, Bob K6DDX

1116. SMD ICs and other SMD componets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Luis Martins <luis.martins@ruido-visual.pt>
Message-ID: <38A2EC51.77260567@ruido-visual.pt>
Source record: 63421

hi all,
do you know of a smd componets supplier ?
digital ICs to be more precise ;)

luis

1117. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Luis Martins <luis.martins@ruido-visual.pt>
Message-ID: <38A2EBF2.96CA48FA@ruido-visual.pt>
Source record: 63422

sorry, i've just checked and they don't have any lcd 7 segments, only
led 7 seg.

luis

1118. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38A2EC8C.1F80FD13@mlecmn.net>
Source record: 63423

Michael Tracy wrote:
>
> Does anyone know of a source for 7-segment LCDs?

http://www.digikey.com has Varitronix multiple-digit LCD display
modules and Lumex single-digit displays.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

1119. Re: Help Sick Fluke 87 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <38A2F3BD.9B703CD3@juno.com>
Source record: 63424

Not free $85 was the quote yesterday.

"jstrohm@texas.net" wrote:
>
> In article <389E6F54.D9B8E32D@juno.com>,
> gdbear1@juno.com wrote:
> > Hi, I have a Fluke 87 (about 8years old).
>
> [symptoms deleted]
>
> Send it to Fluke, and they will fix it. The meter has a lifetime
> warranty, and repairs are free unless you obviously abused it --
> I had to pay for my Fluke 77 repairs after I put a non-current-limited
> 1500VAC across it. But the repairs were a lot cheaper than a
> replacement.
>
> If you find a used but busted Fluke meter for cheap, it might be worth
> your time to buy it and send it to Fluke for repair. A lot of owners
> don't know this.
>
> Jim
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1120. Re: Printed Circuit Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000210131350.01213.00000314@ng-ch1.aol.com>
Source record: 63425

>
>Stability? Well I think it's pretty much limited by the temperature
>coefficients of expansion of the materials, so that a proper proportioning
>of the inductor could result in good stability. In other words, an increase
>in size would result in no change of inductance. You might have to be
>clever to accomplish it.
>
>This assumes the materials are isotropic, pretty reasonable for stuff like
>epoxy filled fiberglass.
>
>Do outfits like Coilcraft make PC inductors, or are they limited to wire
>designs?
>
>See Terman's handbook for inductance of a straight wire; there is a graph.
>You can see how wire diameter and length affect inductance, and thus there
>is probably a ratio of the two that would maintain a constant value over a
>reasonable range of temperature. Probably some playing around with
>terminations would have a lot of effect too.
>
>I wish I had some practical experience to share but I don't.

I've used PC inductors and PC spark gaps for RFI and EMI control. For small, non critical values, they work quite well and are cheaper than ferrite beads. Another technique I've used is a PC inductor with a ferrite disc cemented to the PC on the opposite side. I tried making a VHF preamp once with PC inductors, and ferrite slugs mounted in tubes glued above the inductors for adjusting. It worked, but the Q wasn't quite as good as a regular coil, possibly because of the necessity of having a wire jumper to make contact with the inner end of the spiral. (single-sided board) Fertile ground for experiment though.

Doug Moore KB9TMY (Formerly K6HWY)

1121. Re: DTMF/RS232 converter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: andy <1@a.b.c>
Message-ID: <YAqjOFx4KC3r5t4stm26seU30i1P@4ax.com>
Source record: 63426

I have made such a project long ago, at that time I used a vic-20 to handle the hardware, as it was already watching other hardware. It was connected to my pc with the serial port.
If I was going to make something today, I would use the printer port on the pc to read the dtmf decoder.
If your printer port is at all modern, it should support 8 input/output lines, plenty for the 4 or 5 bit info you want to read.

1122. Re: Pot taper article in CQ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Hans Freudenborg <hansf@introweb.nl>
Message-ID: <950216124.574443@tbird.introweb.nl>
Source record: 63427

Hi Joe,

The article was in the July 1999 issue, pages 29-30-31.
The author was George Murphy,VE3ERP.

73, Hans PA3GLS

<n5kat@my-deja.com> schreef in berichtnieuws 877pok$906$1@nnrp1.deja.com...
> Just after I gave away my old CQs, I need the author and date of the
> article published in 1999 CQ on adjusting potentiomenter taper with
> external resistors.
>
> Appreciate it if anyone could help with this info so I can order the
> back issue. Or I'll buy yours ;->
>
> Thanks and 73,
> Joe N5KAT
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1123. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <38A319A8.794BDF32@my-deja.com>
Source record: 63428

Luis Martins wrote:
>
> sorry, i've just checked and they don't have any lcd 7 segments, only
> led 7 seg.
>
> luis

Well, I checked before I posted and it appears that they do have them.
It just took a little looking. I also have the catalog and they are
in the catalog. Maybe you are seeing something I'm not. Oh well.

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

1124. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Derek Toeppen <derekt@rosalie.col.hp.com>
Message-ID: <87v6ge$m65$1@nonews.col.hp.com>
Source record: 63429

David Shalita <af389@lafn.org> wrote:

I have been using TurboCad. www.turbocad.com. They have
2D and 3D packages at various prices. They even have a
downloadable version. I have not used the downloadable one
so I can't tell you how they limit it. My experience is limited
to the 2D standard version.

: Hi,

: Can you folks identify a low cost CAD software I can
: use to make general mechanical drawings, QRP cabinet layouts,
: ALTOID Tin layouts, lawn layouts, etc?

: Shareware would be the best but do not limit recommendations.

: Thanks and 73, W6MIK
: --
: David Shalita (Dave)
: af389@lafn.org
: Van Nuys, CA

1125. Re: SMD ICs and other SMD componets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38A31E25.82745B61@agilent.com>
Source record: 63430

I've been getting SMT Rs, Cs, Ls, Qs, Ds and Us (that last one is ICs, both digital and analog...In digital, it's ranged from PIC microcontrollers to 74AC-series logic to Xilinx CPLDs) from DigiKey and from Mouser here in the US, for my hobby work. I've even gotten fuses and PTCs in SMT. Considering how large a percentage of new commercial designs use SMT, I'd be surprised if other similar suppliers in other parts of the world didn't stock them as well.

Cheers,
Tom

Luis Martins wrote:
>
> hi all,
> do you know of a smd componets supplier ?
> digital ICs to be more precise ;)
>
> luis

1126. Looking for Curtis Keyer 8044B Chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: Antoine M&#65533;nager <amenager@wanadoo.fr>
Message-ID: <87v8hsenm1@wanadoo.fr>
Source record: 63431

Hi,
Do you know where can I find a Curtis Keyer 8044B chips.
If it's possible an Online Store

Thank's

Antoine

1127. Re: Looking for Curtis Keyer 8044B Chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: chipster66@hotmail.com
Message-ID: <38a42d5d.17391081@news.usol.com>
Source record: 63432

On Thu, 10 Feb 2000 21:47:22 +0100, "Antoine Mï¿½nager"
<amenager@wanadoo.fr> wrote:

>Hi,
>Do you know where can I find a Curtis Keyer 8044B chips.
>If it's possible an Online Store

MFJ has the Curtis 8045ABM chip at www.mfjenterprises.com , for $19.95
(US) if that helps ? Looks like the part number is CK-8045ABM.

>Thank's
>
>Antoine
>
>
>
>

1128. Re: WTB LOCTAL SOCKETS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <6940-38A32D30-54@storefull-124.iap.bryant.webtv.net>
Source record: 63433

HE LIVES 5 MILES FROM ME. NEED SOMEONE WHO DOESN'T WANT $3.00 AND UP
FOR THEM. I USE THEM TO MAKE 1L6 ADAPTORS FOR ZENITH TRANS-OCEANICS,
MY CUSTOMERS WON PAY THE EXTRA COST.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

1129. computers:need to know

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: al <kc4sbjNOkcSPAM@hotmail.com.invalid>
Message-ID: <0ec4c663.5e947846@usw-ex0107-050.remarq.com>
Source record: 63434

i have a EA2 TLM (MAYBE A ILM) SYS 1ESS REM UNIT I KNOW THAT THIS EQ.
IS COMPUTER RELATED I WOULD LIKE TO KNOW WHAT IT IS AND SOME INFO ON,IF
ANY INFO AROUND

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

1130. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: gc@Radix.Net
Message-ID: <87vld0$4oo$1@saltmine.radix.net>
Source record: 63435

In article <389F628D.94EBC9FD@lafn.org>, David Shalita <af389@lafn.ORG> wrote:
>Hi,
>
>Can you folks identify a low cost CAD software I can
>use to make general mechanical drawings, QRP cabinet layouts,
>ALTOID Tin layouts, lawn layouts, etc?
>
>Shareware would be the best but do not limit recommendations.

QCad might be what you are looking for. It is free open-source
software that runs on Linux. I haven't tried it yet myself, so
can't give any input on how well it works. It's just in my
bookmarks file as something to check out some day when I need it.

Go to http://www.qcad.org. Be careful to put in the "org".
qcad.com is somebody else.

73,
Gary

1131. Re: 2.4 Ghz Wavecom

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: AAAjim_cronin@juno.com.ZZZ
Message-ID: <A=WiOCsIKQX2Rf9Pch0C5a=bLUy8@4ax.com>
Source record: 63436

A 1/4 wave antenna would be easier to build. Also, you can add a MMIC
amp for a little more power. For more info check:

http://www.ipass.net/~teara/atv4.html

73..Jim N2VNO

On Tue, 08 Feb 2000 18:12:30 +0200, dan <dan1@otenet.gr> wrote:

>Dear Gentlemen:
>
>I have this little system, and I want to put it a 5/8 element.
>Does anyone know what is going to be the matching device for best
>performance?
>And is there any general formula function of frequency, that is going to
>
>give me Henrys and/or Farads for this?
>Thanks.

1132. RACES info: where to find?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-10 00:00:00 UTC
From: max nielsen <kd7fqo@arrl.net>
Message-ID: <38A3738A.323D1A65@arrl.net>
Source record: 63437

The ARRL is no longer carrying RACES manuals. Where else might I look to find info on how it is set up, who is supposed to run it, how it is coordinated with civil agencies, etc?

Sorry for the post on this newsgroup; maybe you can direct me to a more appropriate one!

Thanks and 73

Max Nielsen KD7FQO

1133. Need help identifying...!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: Mark Daniell <MaDaniell@worldnet.att.net>
Message-ID: <38A39AB2.5ABC@worldnet.att.net>
Source record: 63345

Help! Can anyone identify this tuner?

http://home.att.net/~madaniell/pics/Tuner30.jpg
http://home.att.net/~madaniell/pics/Tuner30.jpg
http://home.att.net/~madaniell/pics/Tuner30.jpg

Any help would be appreciated!

1134. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38A39EA9.7B5277C1@webaxs.net>
Source record: 63346

What have you heard about turbo-cad? i have an old version of it.

Steve Carlisle wrote:
>
> Turbocad seems very close to going belly up. Try a Autocad
> clone at www.cadopia.com
>
> Steve Carlisle
>
> On 10 Feb 2000 20:19:26 GMT, Derek Toeppen <derekt@rosalie.col.hp.com>
> wrote:
>
> >David Shalita <af389@lafn.org> wrote:
> >
> > I have been using TurboCad. www.turbocad.com. They have
> >2D and 3D packages at various prices. They even have a
> >downloadable version. I have not used the downloadable one
> >so I can't tell you how they limit it. My experience is limited
> >to the 2D standard version.
> >
> >: Hi,
> >
> >: Can you folks identify a low cost CAD software I can
> >: use to make general mechanical drawings, QRP cabinet layouts,
> >: ALTOID Tin layouts, lawn layouts, etc?
> >
> >: Shareware would be the best but do not limit recommendations.
> >
> >: Thanks and 73, W6MIK
> >: --
> >: David Shalita (Dave)
> >: af389@lafn.org
> >: Van Nuys, CA

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

1135. rf amplifiers mailing list

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38A3FF37.D0B2A7B2@bright.net>
Source record: 63347

Anyone know where I can access the rf amplifiers mailing list archive.
Web searchs show it at contesting.com but that always comes up as an
errer. Thanks.

73
Paul

1136. Need Stopwatch Circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: shewinky@aol.com
Message-ID: <20000211112226.01097.00000229@ng-bj1.aol.com>
Source record: 63348

I'm working on a project that requires a stopwatch. Resolution down to .01 seconds (1/100th). Need to stop and start from external contacts, and would like to pump it into a 1" display. Anyone know of a circuit in a cookbook or hobby kit that can be adapted? Don Lancasters IC Cookbook of 1977 showed one using an Intersill 7045, but that chip can no longer be found.

Thanks

Shew
KG4ERX

1137. Re: Need Stopwatch Circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: "Carel Mulder (PA0CMU)" <cmulder@casema.net>
Message-ID: <38A444F9.50822C9D@casema.net>
Source record: 63349

Buy a cheep stopwatch as used for several sports. Place it in a box or
whatever you want and connect the external contacts parallel with the
build-in contacts.

Carel.

SHEW IN KY wrote:
>
> I'm working on a project that requires a stopwatch. Resolution down to .01
> seconds (1/100th). Need to stop and start from external contacts, and would
> like to pump it into a 1" display. Anyone know of a circuit in a cookbook or
> hobby kit that can be adapted? Don Lancasters IC Cookbook of 1977 showed one
> using an Intersill 7045, but that chip can no longer be found.
>
> Thanks
>
> Shew
> KG4ERX

1138. Re: Looking for Curtis Keyer 8044B Chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: "Carel Mulder (PA0CMU)" <cmulder@casema.net>
Message-ID: <38A44645.3A60D7B9@casema.net>
Source record: 63350

If you can't find it and need a keyer-chip surf to:

http://members.aol.com/k1el

and read the info. For $8 you receive a perfect keyer.

Carel.

Chip wrote:
>
> On Thu, 10 Feb 2000 21:47:22 +0100, "Antoine Mï¿½nager"
> <amenager@wanadoo.fr> wrote:
>
> >Hi,
> >Do you know where can I find a Curtis Keyer 8044B chips.
> >If it's possible an Online Store
>
> MFJ has the Curtis 8045ABM chip at www.mfjenterprises.com , for $19.95
> (US) if that helps ? Looks like the part number is CK-8045ABM.
>
> >Thank's
> >
> >Antoine
> >
> >
> >
> >

1139. Hex Beam ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <38a4654f.6193660@news.mcn.org>
Source record: 63351

I have been trying to find the dimensions for the Hex beam in order to attempt to model it.

I have gone to the manufacture's web page, however, other than the turning radius no other dimensional information is given for the antenna.

Can anyone provide me with the mechanical specifications for this antenna?

Thanks
Danny, K6MHE

1140. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a33685.365606987@news.online.no>
Source record: 63352

On Thu, 10 Feb 2000 10:27:18 -0500, Siegfried Rambaum
<siram@lightlink.com> wrote:

>Gerade wenn es sich um internationale Gruppen handelt, sind andere
>Sprachen zulaessig....
>
>73 de KB2YVC in FN12rj
>
Agree, but if you shall expect some postive response it doesn't help
much to use other language than English

73 es tschuess aus Norwegen
de LA8AK in JO38 (DS80b)

1141. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <3Z0p4.6185$%M5.122273@bgtnsc06-news.ops.worldnet.att.net>
Source record: 63353

Didn't you know Al Gore invent the internet in English!

--
Mike Knowlton
Panama City Fl.

J M Noeding <LA8AK@online.no> wrote in message
news:38a33685.365606987@news.online.no...
> On Thu, 10 Feb 2000 10:27:18 -0500, Siegfried Rambaum
> <siram@lightlink.com> wrote:
>
>
> >Gerade wenn es sich um internationale Gruppen handelt, sind andere
> >Sprachen zulaessig....
> >
> >73 de KB2YVC in FN12rj
> >
> Agree, but if you shall expect some postive response it doesn't help
> much to use other language than English
>
> 73 es tschuess aus Norwegen
> de LA8AK in JO38 (DS80b)

1142. FS: capacitors, tubes, sockets, sweeps, vacuum relays, MORE...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: ovrreactor@aol.com-nospam
Message-ID: <20000211183626.22406.00003169@ng-fh1.aol.com>
Source record: 63354

I've moved my "Tom's Online Garage Sale". I merged it with one of my "other" websites. There's a ton of stuff that I'm selling, like capacitors, tubes, sockets, vacuum relays, and tons of other stuff that I just don't have room for. Go to;

http://members.aol.com/ecc81

Also, I listed a whole bunch of capacitors on eBay last weekend. No reserve, most opening bids are $0.50 for the entire lot, some of them have opening bids of $0.01, just because I WANT MY GARAGE BACK! Auctions close this weekend (some Saturday, some Sunday)! To see the whole list, go to;

http://cgi3.ebay.com/aw-cgi/eBayISAPI.dll?ViewListedItems&userid=over-reactor

Here are the lots that I'm auctioning off;

(40) 1800 uF 16 V axial capacitors
(75) 2000 uF 12 V General Instruments axial capacitors
(120) 175 uF 15 V axial capacitors
(2700) 5 uF 12 V General Instruments axial capacitors
(100) 150 uF 25 V axial capacitors
(75) 10 uF 10 V non-polar axial capacitors
(100) 150 uF 35 V RCA/Mallory radial capacitors
(40) 1800 uF 16 V axial capacitors
(200) 33 uF 16 V radial capacitors
(100) 68 uF 16 V Elna radial capacitors
(100) 1200 uF 20 V radial capacitors
(425) 47 uF 40 V radial capacitors
(120) 47 uF 16 V radial capacitors
(300) 150 uF 15 V RCA/Mallory radial capacitors
(75) 200 uF 6 V Ducati axial capacitors
(150) 5 uF 3 V non-polar General Instruments axial capacitors
(75) 50 uF 20 V General Instruments axial capacitors
(50) 30 uF 60 V Mallory axial capacitors
(190) 330 uF 16 V Nichicon axial capacitors
(125) 220 uF 16 V ICC axial capacitors
(75) 20 uF 100 V Mallory axial capacitors
(350) 25 uF 10 V radial capacitors
(150) 25 uF 15 V axial capacitors
(44) 100 uF 63 V United Chemi-con radial capacitors
(90) 10 uF 25 V axial capacitors
(100) 22 uF 35 V radial capacitors
(240) 25 uF 3 V Ducati axial capacitors
(400) 200 uF 6 V axial capacitors
(600) 25 uF 15 V Mallory radial capacitors
(180) 100 uF 15 V Mallory axial capacitors

Regards,
Tom Mitchell
email - OvrReactor@aol.com (remove "nospam")

1143. PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: CessnaPilot@webtv.net
Message-ID: <26415-38A4D8E0-77@storefull-132.iap.bryant.webtv.net>
Source record: 63355

I've been away from building for awhile and it seems Lafayette, Knight, Allied and the others have evaporated. Rat Shak doesn't supply enough to build a GDO coil. Where do you guys buy your components these days? I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm resistor and a 1000 picofarad capacitor. I might as well try to get anti-matter crystals for the Enterprise! Surely there is one supplier left???? TNX, Johnny

1144. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38A4D9C4.25B8@pop.removethistomailme.net>
Source record: 63356

CessnaPilot@webtv.net wrote:
>
> I've been away from building for awhile and it seems Lafayette, Knight,
> Allied and the others have evaporated. Rat Shak doesn't supply enough
> to build a GDO coil. Where do you guys buy your components these days?
> I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
> resistor and a 1000 picofarad capacitor. I might as well try to get
> anti-matter crystals for the Enterprise! Surely there is one supplier
> left???? TNX, Johnny

All I can say is, you must not have been looking very hard.

http://www.radioshack.com actually has a very respectable stock of components, including everything you mentioned (although you'll have to settle for a 200-ohm pot). Next time you're in a Radio Shack store, pick up one of the new commercial catalogs -- it makes a good pictorial index for their site.

http://www.digikey.com, http://www.newark.com, http://www.mouser.com, http://www.jameco.com, and http://www.web-tronics.com/ carry just about everything Radio Shack doesn't.

There are any number of specialized RF- and microwave-specific parts vendors on the net as well, including http://www.minicircuits.com, http://www.downeastmicrowave.com, http://www.shfmicro.com, and http://www.fix.net/dans.html. Some of the smaller outfits have some really annoying policies, such as no way to place credit-card orders on their site, but they're still darned nice to have on your bookmark list.

Then there is eBay. The "Electronic Parts" category on eBay gets a little better-populated every day:
http://listings.ebay.com/aw/listings/list/category4659/index.html

Take a closer look at some of these sources, and you won't miss Lafayette and Allied much at all.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1145. 2.4GHz microstrip line-coupled filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <8814rt$876$1@bbs.aeminium.pt>
Source record: 63357

Hello again (see my midland message ;)

any tips about building a bandpass filter like this? I have several
sources of information but none tells how to calculate the distance between
the lines.

Thank you,
Nuno Sucena

--
http://alumni.dee.uc.pt/~slug
CT1FOX

1146. Re: Need help identifying...!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <aY7p4.6447$TS5.142274@news6.giganews.com>
Source record: 63358

Looks like just two variable capacitors with drum dials. I don't see any inductors. Where did you get this?

73, Bob K6DDX

1147. Re: 6M QRP SSB Transceiver Kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: rice@ironbark.bendigo.latrobe.edu.au
Message-ID: <rice-ya02408000R1102000930200001@news.latrobe.edu.au>
Source record: 63438

Recently, Luis Martins <luis.martins@ruido-visual.pt> wrote:

> do you know of any good, reliable, usable, kit for a qrp transceiver for
> six ?
> must have ssb ;)

Have a look at http://www.intio.or.jp/jf10zl/50M2W.htm

Has full schematic diagram & a description (which I haven't read completely ;-)

It's home brew (not a kit). Looks like a good fun project, but you will
need to know what you are doing.

73 de Phil VK3BHR

1148. Hamradio pics and specifications

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: Martin Rask <martin.rask@mailbox.swipnet.se>
Message-ID: <rSHo4.9841$jg4.20417@nntpserver.swip.net>
Source record: 63439

Have you ever wonderd how a specific radio looks like ?. If that's the case I hope that this page can be the solutions to your problems. On this page I will put all information about rigs that I can find mostly pictures and specifcations. All information is taken dirctly from the companies folders or hompages. Do you have any pictures or folder with information on radios that I don't have ? If you have and would like to help, please send pictures or information to the email adress below.
Email : martin.rask@mailbox.swipnet.se

http://www.qsl.net/sm7vhs/radio

Best Regards Martin SM7VHS

1149. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: quatsein@island.net
Message-ID: <38a36342.250079606@news.cr.island.net>
Source record: 63440

Turbocad seems very close to going belly up. Try a Autocad
clone at www.cadopia.com

Steve Carlisle

On 10 Feb 2000 20:19:26 GMT, Derek Toeppen <derekt@rosalie.col.hp.com>
wrote:

>David Shalita <af389@lafn.org> wrote:
>
> I have been using TurboCad. www.turbocad.com. They have
>2D and 3D packages at various prices. They even have a
>downloadable version. I have not used the downloadable one
>so I can't tell you how they limit it. My experience is limited
>to the 2D standard version.
>
>: Hi,
>
>: Can you folks identify a low cost CAD software I can
>: use to make general mechanical drawings, QRP cabinet layouts,
>: ALTOID Tin layouts, lawn layouts, etc?
>
>: Shareware would be the best but do not limit recommendations.
>
>: Thanks and 73, W6MIK
>: --
>: David Shalita (Dave)
>: af389@lafn.org
>: Van Nuys, CA

1150. Re: Printed Circuit Inductor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <20000210200200.24980.00002561@ng-ci1.aol.com>
Source record: 63441

Several commercial land mobile radio manufacturers have used printed inductors on FR-4 style printed wiring boards as tuning elements on their UHF (470 MHz) VCO's. Since the VCO as part of a synthesizer can somewhat tune out small, long term deviations in inductance (like those caused by temperature variations), it is an appropriate application. I also have a GE MASTRII transceiver here in the house that uses spiral printed inductors on its boards, although at the moment I don't know in what stage without looking at the manual.

There have been articles published on designing these, but most of them that I have access to would date back to the mid to late 1970's (not that the physics change). These coils are very repeatable in manufacture and are practical in certain applications. Just like anything else, there is a cost versus performance tradeoff. They will certainly not compete with a Kovar cavity for Q, volume or cost. Knowing what the application was for your friends need (oscillator element, filtering, etc.) and what frequency under what environmental conditions and cost constraints and manufacturing quantity would determine if a printed coil is a likely candidate.

73

John...
WB4LNM

>A friend is looking for design info to make printed circuit inductors.
>
>He asks "How practical is this technique for manufacturerd product where
>repeatability is important"?
>
>Need a pointer to papers or text. First inductor would be 0.16 uH.
>Interested in what Q, fequency stability, microphonics, which pcboard
>material is needed. Application frequency was not provided.
>So assume FM band, 88-108 mhz.....just to identify stability issues.
>73, and thanks, W6MIK
>--
>David Shalita (Dave)
>af389@lafn.org
>Van Nuys, CA
>
>
>
>
>
>
>

1151. Re: SMD ICs and other SMD componets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38A35EFD.9C7CA24F@hotmail.com>
Source record: 63442

Digi-key, Jameco, etc, look at thier websites

Luis Martins wrote:

> hi all,
> do you know of a smd componets supplier ?
> digital ICs to be more precise ;)
>
> luis

1152. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38a377bf.1853491@news.mindspring.com>
Source record: 63443

Well, you'll probably get more replies if you can use english.

Russ Nixon

Siegfried Rambaum <siram@lightlink.com> wrote:

>> This is an international newsgroup so please use the english language
>> here..
>>
>> 73 de dc6xs Robert
>
>Lies Deine Bemerkung noch einmal und denk drueber nach, ob
>
> "international" = "Englisch" ???
>
>Gerade wenn es sich um internationale Gruppen handelt, sind andere
>Sprachen zulaessig....
>
>73 de KB2YVC in FN12rj
>

1153. Re: SMD ICs and other SMD componets ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-11 00:00:00 UTC
From: maddog@io.com
Message-ID: <38a38451.1741242@news.io.com>
Source record: 63444

On Thu, 10 Feb 2000 16:50:25 +0000, Luis Martins
<luis.martins@ruido-visual.pt> wrote:

>hi all,
>do you know of a smd componets supplier ?
>digital ICs to be more precise ;)

www.digikey.com
www.newark.com
www.alliedelec.com

and many more...

monty N5FC

1154. FS: Dale Bleeder Resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Joe Hargis <joehargis@worldnet.att.net>
Message-ID: <XS1p4.6251$%M5.124329@bgtnsc06-news.ops.worldnet.att.net>
Source record: 63359

Have a few Dale, 100K @100W, 5%, bleeder resistors, used but in great condition, for $5 ea....Joe, WS0E in MO 65714, tnx

1155. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: quatsein@island.net
Message-ID: <38a4bc8c.338486550@news.cr.island.net>
Source record: 63360

I bought TurboCad many years ago, and the support at that time
was poor. I have recently downloaded TurboCads free version
and used that until I downloaded Intellicad 2000. I heard from
another poster that they are downsizeing there operation and
laying of staff. Bad sign.

Steve

On Fri, 11 Feb 2000 16:31:21 +1100, russell shaw <russell@webaxs.net>
wrote:

>What have you heard about turbo-cad? i have an old version of it.
>
>Steve Carlisle wrote:
>>
>> Turbocad seems very close to going belly up. Try a Autocad
>> clone at www.cadopia.com
>>
>> Steve Carlisle
>>
>> On 10 Feb 2000 20:19:26 GMT, Derek Toeppen <derekt@rosalie.col.hp.com>
>> wrote:
>>
>> >David Shalita <af389@lafn.org> wrote:
>> >
>> > I have been using TurboCad. www.turbocad.com. They have
>> >2D and 3D packages at various prices. They even have a
>> >downloadable version. I have not used the downloadable one
>> >so I can't tell you how they limit it. My experience is limited
>> >to the 2D standard version.
>> >
>> >: Hi,
>> >
>> >: Can you folks identify a low cost CAD software I can
>> >: use to make general mechanical drawings, QRP cabinet layouts,
>> >: ALTOID Tin layouts, lawn layouts, etc?
>> >
>> >: Shareware would be the best but do not limit recommendations.
>> >
>> >: Thanks and 73, W6MIK
>> >: --
>> >: David Shalita (Dave)
>> >: af389@lafn.org
>> >: Van Nuys, CA
>

>--
>***
>* Russell Shaw, B.Eng, M.Eng(Research) *
>* Electronics Consultant *
>* email: russell@webaxs.net *
>* Australia *
>***

1156. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a4ad80.461617073@news.online.no>
Source record: 63361

On Fri, 11 Feb 2000 23:31:11 GMT, "AMDX" <AMDX@worldnet.att.net>
wrote:

>Didn't you know Al Gore invent the internet in English!
>
Mann lernt doch wie lange mann leben
[Norsk: man laerer saa lenge man lever]

1157. Re: rf amplifiers mailing list

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: technofreak@wa.freei.net
Message-ID: <38a4be64.23353668@news.usenetserver.com>
Source record: 63362

Try http://www.contesting.com/_amps/

On Fri, 11 Feb 2000 07:23:19 -0500, Paul Martin <pmartin@bright.net>
wrote:

>Anyone know where I can access the rf amplifiers mailing list archive.
>Web searchs show it at contesting.com but that always comes up as an
>errer. Thanks.
>
>73
>Paul
>

1158. Re: Comms Quarterly to combine with QEX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Paul Hinman <paulhinman@home.com>
Message-ID: <38A50AE9.4ACD515B@home.com>
Source record: 63363

I phone 73 the other day and asked if they were still in business. The are still alive but they have decided against news stand distribution.

Michael Black wrote:

> In article <387BA943.A2A295B0@agilent.com>, Tom Bruhns
> <tom_bruhns@agilent.com> wrote:
>
> > Brad Thompson wrote:
> >
> > > Sheesh.... at this rate, we're gonna wind up with only one hobbyist-related
> > > construction magazine, catering to audio/radio/robotics/model
> aircraft/amateur
> > > telephony
> > > and tesla coils-- all at a level supported by whatever components you
> can still
> > > purchase
> > > off-the-rack at Radio Shack.
> >
> > I didn't notice any postings about it yet, but surely it's just 'cuz I
> > missed them...but the latest issue of "Electronics Now" that I
> > got...isn't. Now it's "Poptronics," the merging of Popular Electronics
> > and Electronics Now.
> >
> > Building Tesla coils from RS componenets? Wow, what an interesting
> > thought!
> >
> > Cheers,
> > Tom
>
> Michael Covington, a Ham, who takes care of the Q&A column in "Electronics
> Now" and may have some greater role in the magazine, started a long thread
> a couple of months back in one of the sci.electronics.* newsgroup about
> the impending merger of the two magazines. Actually, the merger was
> incidental, but he was interested in hearing about what people thought
> about the future of electronic hobby magazines.
>
> Is 73 still around? It kept getting smaller, and less interesting,
> and then it wzs sporadic here in Montreal. Then sometime last year, it
> stopped showing up at the newsstands here. It appeared to be a cutback
> in distribution, but it didn't seem all that healthy the last time
> I saw it, so I don't think it's got much time left. Though Wayne
> was on Art Bell last week, and seemed the same as always.
>
> Michael VE2BVW

1159. Off-Air Frequency Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Joe McElvenney <joemac@xic.demon.co.uk>
Message-ID: <VA.00000009.004ad60f@xic.demon.co.uk>
Source record: 63364

Hi,

I am looking to construct, as a learning project, an off-air frequency standard using one of the UK transmitters such as Droitwich (198kHz) or MSF (60kHz) and thus condition an oscillator ï¿½ la W5OJM's GPS-based design or my own version thereof. I would appreciate any thoughts you folks might have on this and pointers to any sites having information especially that on problems due to the vagaries of propagation in the LF/MF regions. This type of thing has been done before, I know, but I just want to play :-)

Thanks in advance.

73 de G3LLV - Joe

1160. Re: 2.4GHz microstrip line-coupled filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a541be.499572738@news.online.no>
Source record: 63365

On 11 Feb 2000 14:03:41 GMT, slug@aeminium.dhis.dee.uc.pt wrote:

>Hello again (see my midland message ;)
>
>
> any tips about building a bandpass filter like this? I have several
>sources of information but none tells how to calculate the distance between
>the lines.
>
> Thank you,
> Nuno Sucena
>
>--
>http://alumni.dee.uc.pt/~slug
>CT1FOX
believe S53MV showed some versions for 23, 13, 9, 6, 3cm in
VHF-communications since 1988 in several series of articles

1161. Re: Need help identifying...!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Mark Daniell <MaDaniell@worldnet.att.net>
Message-ID: <38A56820.344C@worldnet.att.net>
Source record: 63366

Bob wrote:
> Looks like just two variable capacitors with drum dials. I don't see any
> inductors. Where did you get this?

Bob,
According to one response, it's a Radiola 25. I've been trying to
find another picture but have come up empty.
I acquired it at an auction (it was in a box with other stuff)
It does have a coil, about 2 inches in diameter...3/8 inch high.

Thanks for the repsonse,
Mark

1162. Re: Looking for Curtis Keyer 8044B Chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Antoine M&#65533;nager <amenager@wanadoo.fr>
Message-ID: <883or9ims1@wanadoo.fr>
Source record: 63367

Thank's for that help, I ll go to see if I can use it...

Antoine

> If you can't find it and need a keyer-chip surf to:
>
> http://members.aol.com/k1el
>
> and read the info. For $8 you receive a perfect keyer.
> > >Do you know where can I find a Curtis Keyer 8044B chips.
> > >If it's possible an Online Store
> >
> > MFJ has the Curtis 8045ABM chip at www.mfjenterprises.com , for $19.95
> > (US) if that helps ? Looks like the part number is CK-8045ABM.
> >

1163. FS: tunnel diodes, large toroids and hard to find RF and HV components

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: bw201@torfree.net
Message-ID: <FptnL3.JDK.0.queen@torfree.net>
Source record: 63368
Cross-posted to: rec.radio.swap,alt.ham-radio.marketplace,sci.electronics.components,alt.electronics,sci.electronics.misc,rec.radio.amateur.homebrew,rec.radio.repair

Reduced prices and improved, much easier to read format.

http://www3.sympatico.ca/aquariusr/sale1.htm

A friend has set up a web site for me to sell off a 28 year
accumulation of electronic components including:

Coaxial Power switch,
RF power and other transistors, RF I.C.'s,
1N3712 Tunnel diodes, 1N5711 Schottky diodes,
Ceramic 455kHz and 10.7MHz filters,
Minicircuits mixers,
variable capacitors, both panel mount shaft type and trimmer
variable inductors and coil forms,
High voltage vacuum relays, rectifiers, resistors and capacitors,
Other capacitors including, Photoflash, polypropylenes, and tantulums,
switches, such as foot switches and industrial limit (micro) switches,
Ferrites beads, large E-cores and toroids, etc.
Transformers and inductors,
and lots, lots more.

Bob Levitt

1164. FS: 1000's of Tubes, cheap

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <883t0g$4t7q$1@newssvr04-int.news.prodigy.com>
Source record: 63369
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap

e-mail m.pasternack@prodigy.net for 10 page list with prices. Murray, W6KRC

1165. Re: suche

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Siegfried Rambaum <siram@lightlink.com>
Message-ID: <Pine.GSU.4.10.10002121012470.17591-100000@adore.lightlink.com>
Source record: 63370

> Didn't you know Al Gore invent the internet in English!

humm ... with the particle being Al, I would have expected
"Arabic", not "English".

By the way, into what would an "al gore" translate into, min fadlak ?

shookran :))

KB2YVC in FN12rj

> --
> Mike Knowlton
> Panama City Fl.
>
> J M Noeding <LA8AK@online.no> wrote in message
> news:38a33685.365606987@news.online.no...
> > On Thu, 10 Feb 2000 10:27:18 -0500, Siegfried Rambaum
> > <siram@lightlink.com> wrote:
> >
> >
> > >Gerade wenn es sich um internationale Gruppen handelt, sind andere
> > >Sprachen zulaessig....
> > >
> > >73 de KB2YVC in FN12rj
> > >
> > Agree, but if you shall expect some postive response it doesn't help
> > much to use other language than English
> >
> > 73 es tschuess aus Norwegen
> > de LA8AK in JO38 (DS80b)
>
>
>
>

1166. Oscilloscope Probe

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <6_ep4.1429$Uq4.11587637@server2.news.adelphia.net>
Source record: 63371
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,sci.electronics.equipment

Leader model LP-16A. Has two settings... X1 (1M, 250pF) and X10 (10M, 25 pF). Screwdriver adjustable compensation. Works well.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=258429667

1167. WTB: NOS TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: BlueStrat <bluestat@erols.com>
Message-ID: <38A58439.E8BE210E@erols.com>
Source record: 63372

Looking for large or small quantities of the following NOS (preferably
in
original boxes) tubes.

6V6GT, 6L6GC,EL37, 5AR4/GZ34, 5Y3GT, 5R4, 5V4, 6K6GT, 6CA7/EL34,
6BQ5/EL84, 7189A, 7027,
7591A, 7581A, 12AX7A/ECC83, 5751, 12AY7/6072, 7025, 12AT7, 7199, 5881,
6550,
7868, KT-66,77,88.

Also, octal socket extenders/savers.

Please list brand, price, qty available, and whether in
original box.

Thanks,
Mike
703-430-8713
bluestat@erols.com

1168. FA eBay NEC Laser, CP/M OS, 2 way radio equipment, HF SSB RX, mechanical filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Steve Lenaghan <southwest_telephone@mail.com>
Message-ID: <38A58525.C47AFF51@mail.com>
Source record: 63373
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

FA eBay NEC Laser, CP/M OS, 2 way radio equipment, HF SSB RX, mechanical filter, oil painting
I have the following auctions underway:

257030450: Motorola DC Remote Control
Bidding starts at: $10.00
Auction ends on: Feb-19-00, 08:39:21 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257030450

257032506: Motorola Multi Charger for MH70
Bidding starts at: $10.00
Auction ends on: Feb-19-00, 08:43:05 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257032506

257037440: Power Supply, 24V DC 6 Amp
Bidding starts at: $25.00
Auction ends on: Feb-19-00, 08:52:43 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257037440

257039510: HP 532B uWave Frequency Meter
Bidding starts at: $25.00
Auction ends on: Feb-19-00, 08:56:32 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257039510

257785202: Collins Mechanical Filter
Bidding starts at: $25.00
Auction ends on: Feb-20-00, 08:28:53 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257785202

257028587: NEC Silentwriter
Bidding starts at: $20.00
Auction ends on: Feb-19-00, 08:35:50 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257028587

257040792: Concurrent PC DOS, CP/M, Mint !!
Current bid: $20.00
Auction ends on: Feb-19-00, 08:59:08 PST
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257040792

Steve L.

1169. HAM RADIO on the Internet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: skbenjamin@aol.com
Message-ID: <20000212115128.21939.00000439@ng-fi1.aol.com>
Source record: 63374

```
CQ DX NETWORK
http://geocities.com/cqdxnet2000

Join the other amateurs on the Internet
Talk person to person or in a group and
use the online repeaters, tcp/ip and links
for local amateurs to talk in to the
network. Talk and do tcp/ip at the same
time. CQ DX Network is expanding and
if you are a amateur radio operator, we
invite you to join us.

Just e-mail us with the following info.:

Amateur Call
Full name
City
State or Country
e-mail listed (qrz)

73 CQ DX Network
```

1170. FA - Amplifier Parts / Tubes / Last day

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000212120010.25797.00002954@ng-fn1.aol.com>
Source record: 63375

FA / Last Day

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=256630074

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=256676378

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=256684042

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257898138

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257906703

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=257919910

1171. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <MKulOO1sgltPwMsIoOTlL8nawY3a@4ax.com>
Source record: 63376

On Sat, 29 Jan 2000 23:15:29 -0500, "Tim Seguin" <tatraweb@core.com> wrote:
>I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
>good deal or a waste of money?

Since I did buy their 2m kit, found many of its problems, debugged them, and came up with modifications to make it at least legal if not actually clean, I can confidently say, buy something else unless you're trying to sharpen your debugging and redesign skills, and have sufficient test equipment to do so. At minimum, a spectrum analyzer and a good calibrated signal generator are necessary to debug the radio's problems and confirm that your modifications fix them.

The FX series manual is exhaustive, in some senses a cut above what most of the others provide, but the basic radio design is flawed. If you follow the manual's tune up procedures, you'll have a comb generator instead of a clean transmitter. Receive sensitivity will be wretched, you'll have a sweeping spur across the band when you go from receive to transmit, there's a nasty *thump* in the audio. etc. You *can* fix all of these problems, but it does require some redesign.

OTOH TenTec kits are generally excellent. Kanga offers some good kits. There are a number of others. Most of these will work correctly if you build them and tune them up according to the instructions. Ramsey is not in their league.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1172. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <uLKlOA3obI1bO4AgcVIFKPzevc4R@4ax.com>
Source record: 63377
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Tue, 1 Feb 2000 23:18:59 -0000, "Gary Peach" <xcg34@dial.pipex.com> wrote
>Ian White, G3SEK wrote ...
>> >Gary7SLL, wondering how to generate a semi circular log scale with a
>> >graphics package.
>> >
>> >
>> AutoSketch will do it. If you calculate the angles involved - measured
>> from a baseline, and centred on the pivot point - you can make
>> AutoSketch draw a scale mark at any specified angle using keyboard
>> input. It's tedious but very precise.
>
>I'd like to instal Auto CAD 13, but at that price no way.
>I think it has a function for doing log type work directly.

Autosketch is *much* cheaper than AutoCad. $99 as I recall.
In some ways it is even a better program than its big brother.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1173. Re: Off-Air Frequency Standard

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a56666.508957886@news.online.no>
Source record: 63378

On Sat, 12 Feb 2000 12:04:40 GMT, Joe McElvenney
<joemac@xic.demon.co.uk> wrote:

>Hi,
>
> I am looking to construct, as a learning project, an off-air
>frequency standard using one of the UK transmitters such as Droitwich
>(198kHz) or MSF (60kHz) and thus condition an oscillator la W5OJM's
>GPS-based design or my own version thereof. I would appreciate any
>thoughts you folks might have on this and pointers to any sites having
>information especially that on problems due to the vagaries of
>propagation in the LF/MF regions. This type of thing has been done
>before, I know, but I just want to play :-)
>
> Thanks in advance.
>
> 73 de G3LLV - Joe
>
>
>
>
it has been discussion going on waveguide@onelist.com newsreflector
for a year or so
send a mail to Glen Ross <ross@zetnet.co.uk> or try to search for the
URL, can't remember it how to subscribe now

73 jan-martin LA8AK

1174. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <a76lOG0Ll0DbeMPiOOfagBywNPKi@4ax.com>
Source record: 63379

On Fri, 11 Feb 2000 21:52:00 -0600 (CST), CessnaPilot@webtv.net wrote:
>I've been away from building for awhile and it seems Lafayette, Knight,
>Allied and the others have evaporated.

Gee, you *have* been away for a while. :-)

>Rat Shak doesn't supply enough
>to build a GDO coil. Where do you guys buy your components these days?

My first impulse is to check Digikey (1-800-DIGIKEY) or www.digikey.com .
Digikey has a very large selection of parts, is rarely out of stock, accepts
orders either via phone or over the web, and has quick shipping. ($25
minimum order though)

My second impulse (quickly becoming my first impulse) is to check
RadioShack.com, formerly known as Tech America. They have a web
presence at www.radioshack.com . They have a large commercial
selection of parts (growing every day), and better for me, one of their
stocking warehouses is on my daily commute route so I can just drop
in and pick up what I need. No minimum order. (You can also order
through any Radio Shack store.)

Then of course there are the old standbys like Newark and the other
old line distributors. Most of them will sell to you, though they often
have a minimum order requirement varying from $25 to $100, and they
tend to put you on back order for the sorts of things you'd most expect
to be in stock. Just save up your needs until you exceed their minimum,
then wait for them to get around to shipping.

Also, many of the component manufacturers will sample you a part
or two for free. Just call and ask. Motorola has been very good to me,
as have Analog Devices and a number of other manufacturers. This
is one of the best ways for an amateur to get hot new parts.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1175. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38A5C77C.AB5F0A2C@mlecmn.net>
Source record: 63380

Gary Coffman wrote:
>
> On Sat, 29 Jan 2000 23:15:29 -0500, "Tim Seguin" <tatraweb@core.com> wrote:
> >I see Ramsey marked down their FX series 2m, 440, and 6m kits. Are they a
> >good deal or a waste of money?

> OTOH TenTec kits are generally excellent. Kanga offers some good kits. There
> are a number of others. Most of these will work correctly if you build them and
> tune them up according to the instructions. Ramsey is not in their league.

And if you *really* want to save money on a 5-watt 2m rig,
radioshack.com has an Alinco DJ-190TD handheld in their February flyer
for $99.95 (case, speaker mike and rubber duck antenna included).
--
Lyle, K0LR

http://www.computerpro.com/~lyle

1176. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: novatech@eskimo.com
Message-ID: <884jlhhkd1@eskinews.eskimo.com>
Source record: 63381

Gary Coffman <ke4zv@bellsouth.net> writes:

>The FX series manual is exhaustive, in some senses a cut above what most
>of the others provide, but the basic radio design is flawed. If you follow
^^^^^^^^^^^^^^^^^^^^^^^^^^^^
>the manual's tune

This is also my experience. The kits are nicely documented, but full of
engineering errors. Easily fixed, but that's not why most of us buy kits--
at least I don't.

Steve.
--
Steven D. Swift, novatech@eskimo.com, http://www.eskimo.com/~ntsales/
NOVATECH INSTRUMENTS, INC. P.O. Box 55997
206.301.8986, fax 206.363.4367 Seattle, Washington 98155 USA

1177. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8abl7l.6hq.X@animas.frontier.net>
Source record: 63382

On Sat, 12 Feb 2000 15:45:07 -0500, Gary Coffman <ke4zv@bellsouth.net> wrote:
>On Fri, 11 Feb 2000 21:52:00 -0600 (CST), CessnaPilot@webtv.net wrote:
>>I've been away from building for awhile and it seems Lafayette, Knight,
>>Allied and the others have evaporated.
>
>Gee, you *have* been away for a while. :-)

Don't forget Burstien-Applebee ! /sp?/

Jonesy W3DHJ

1178. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <YdalOJtyvekKI9P4wAdmx03KH1Tg@4ax.com>
Source record: 63383

On Sat, 12 Feb 2000 14:50:04 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:
>And if you *really* want to save money on a 5-watt 2m rig,
>radioshack.com has an Alinco DJ-190TD handheld in their February flyer
>for $99.95 (case, speaker mike and rubber duck antenna included).

I got it $10 cheaper when they were selling them at a local hamfest.
Note that the alkaline battery case that comes on it is a piece of crap.
It doesn't have enough contact pressure for the AA battery terminals,
and the pack voltage will sag below the radio's low voltage cutoff while
transmitting, even though the batteries still have lots of life left, due
to the voltage drop across the contact resistance.

This is a pack design defect and I haven't found a good easy way
to increase the contact pressure, so I just use it off an external power
source (barrel connector at side of radio run to a cheap camcorder
gell cell). There is an optional Nicad pack that works Ok, but it is
pretty dear for such a cheap radio. Note too that there is no TT pad.
The DJ195 comes with the Nicad pack and has a TT pad standard,
so it may be a better buy.

Gripes about batteries aside, this is a pretty decent full power basic
HT at a pretty good price. Audio quality is good, intermod resistance is
better than many higher priced radios, etc. I use it as the uplink radio
for my portable AO27 satellite station, and for packet (1200 baud).

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1179. Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: chocalatejay@webtv.net
Message-ID: <17291-38A5D890-49@storefull-211.iap.bryant.webtv.net>
Source record: 63384

EMAIL ME IF YOU KNOW OF ANYONE!

1180. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38A5E6B1.4F2BB9D1@eznec.com>
Source record: 63385

Gary Coffman wrote:
>
> On Sat, 12 Feb 2000 14:50:04 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:
> >And if you *really* want to save money on a 5-watt 2m rig,
> >radioshack.com has an Alinco DJ-190TD handheld in their February flyer
> >for $99.95 (case, speaker mike and rubber duck antenna included).
>
> I got it $10 cheaper when they were selling them at a local hamfest.
> Note that the alkaline battery case that comes on it is a piece of crap.
> It doesn't have enough contact pressure for the AA battery terminals,
> and the pack voltage will sag below the radio's low voltage cutoff while
> transmitting, even though the batteries still have lots of life left, due
> to the voltage drop across the contact resistance.
>
> This is a pack design defect and I haven't found a good easy way
> to increase the contact pressure, . .

I've improved the contact pressure on a number of battery packs by putting a glob of RTV under the contact. This works well for leaf-spring type contacts, but of course won't work for some other types.

Roy Lewallen, W7EL

1181. Re: Need help identifying...!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: ed <edholmes@renc.igs.net>
Message-ID: <38A5F898.B7E2040D@renc.igs.net>
Source record: 63386

Use the internet and search for Radiola, I tried this a couple of months ago
and was surprised to find a bunch of pictures on a Japanese site, complete
with wiring diagrams. Good luck.

Mark Daniell wrote:
>
> Bob wrote:
> > Looks like just two variable capacitors with drum dials. I don't see any
> > inductors. Where did you get this?
>
> Bob,
> According to one response, it's a Radiola 25. I've been trying to
> find another picture but have come up empty.
> I acquired it at an auction (it was in a box with other stuff)
> It does have a coil, about 2 inches in diameter...3/8 inch high.
>
> Thanks for the repsonse,
> Mark

1182. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: aa6lk@jps.net
Message-ID: <38A5F997.2701@jps.net>
Source record: 63387

You will want to avoid the FX-440. I built one five years ago, and having the good
test equipment (spectrum analyzer, signal generator, etc.) I can tell you that this
radio will interfere with many adjacent-channels on both sides. The internal L.O.
radiation was so bad that microphonics were evident, and the L.O. energy is strong
enough to cause some strange internal modulation effect in the PLL where the result
was a nice 25kHz comb on either side of the carrier, starting at only -6dB. Had to
completely shield the L.O. inductor to fix this.

The receiver front end is as wide as a barn door, and was subject to all manner of
intermod. Putting a multi-section helical filter in there helped that greatly, with
some loss of gain (of course). The squelch behavior is not all that pleasant either,
but I decided not to spend any more time on it.

L

1183. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-12 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <886tkv$tc8$1@nntp1.atl.mindspring.net>
Source record: 63388

In article <26415-38A4D8E0-77@storefull-132.iap.bryant.webtv.net>,
<CessnaPilot@webtv.net> wrote:
>I've been away from building for awhile and it seems Lafayette, Knight,
>Allied and the others have evaporated. Rat Shak doesn't supply enough
>to build a GDO coil. Where do you guys buy your components these days?
> I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
>resistor and a 1000 picofarad capacitor. I might as well try to get
>anti-matter crystals for the Enterprise! Surely there is one supplier
>left???? TNX, Johnny

Mouser
Digikey
Allied/Avnet (Yes, Allied still exists)
Newark
Circuit Specialists (a.k.a. Webtronics)
Active (a.k.a. FAI and Future)
Jameco
JDR Microdevices
And whatever Tandy calls their new serious parts distribution arm
now. A year or two ago it was called Tech America, but I gather
it's Radio Shack Online or something like that. All of these have
web sites and have reasonable or almost minimum order requirements.

Not to mention a bunch of surplus places like All, Marlin P. Jones,
B&G Micro, Timeline

Add in service oriented outfits like MCM, Dalbani and others that
specialize in TV and VCR parts.

A copy of Poptronics (the recent merger of Popular Electronics and
Electronics Now (what used to be Radio-Electronics)) or a copy of
Nuts & Volts will have ads for another dozen or so outfits.
www.gernsback.com for Poptronics, www.nutsvolts.com for Nuts & Volts.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1184. ** New BC895XLT software released

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: News <slyster7@mn.mediaone.net>
Message-ID: <x0qp4.29$yT6.5755@typhoon.mn.mediaone.net>
Source record: 63295
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.scanner

AirSCAN released- scanning software for the Uniden BC895XLT. Check out our website to see what it can do for you!

http://people.mn.mediaone.net/slyster7

"Silver Software" 02-12-00
slyster7@mn.mediaone.net

1185. Re: Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38a63043.814741@news.mindspring.com>
Source record: 63296

Jan-Martin,

Is that a switcher or a really big secondary on the
transformer? Note that there was a two ot three-part article in QST
lat year or so for a hefty switching supply. You even get to wind
your oun transformers.

Russ - KF4WXD

LA8AK@online.no (J M Noeding) wrote:

>On Sat, 12 Feb 2000 16:02:56 -0600 (CST), chocalatejay@webtv.net (CASH
>MONEY) wrote:
>
>>EMAIL ME IF YOU KNOW OF ANYONE!
>>
>I built 13.5V 45A DC PSU - have the circuit saved as gif file -
>is that large, or do you need 2000V 5A ?
>
>73 jan-martin

1186. Feds Raid Ramsey - discussion board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: acatalan@pipeline.com
Message-ID: <38a64f0d.98505293@nntp.pipeline.com>
Source record: 63297
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.scanner,rec.radio.amateur.shortwave

In NAZI Germany they had an "official" radio set to RX a single
channel. If you were to break the seal or modify it in any way
the penalty was DEATH. With all this emerging technology the
Klintonistas only want you to know how to push the buttons on
all the wonderful little black boxes and to dutifully pay all the
little ALGORE surcharges. They don't want you to have ANY
inkling on how the innards of these wonderful gadgets work or to be
able to build anythingof your own. QRP homebrewing is
becoming a big thing. Perhaps soon we will have to "register" our
experiments with the FCC and obtain type acceptance on
everything that xmits. An INGNORAMUS is a socialist/democrat's best
customer
** Knock Knock.
Whose there?
** "The Children"
The children who?"
We have a search warrant, none of your beeswax.
Open up! We are well armed with the good gov't guns.
Need I convince you more?
http://www.nra.org Tony (ww2w)
Ramsey info subpage:
http://www.ramseyelectronics.com/cgi-bin/SoftCart.exe/scstore/sitepages/hobby/fedpage3.htm
?L+scstore+ufoz5774+947157453
Feds Raid Ramsey - discussion board
http://www.thisiswrong.com/

1187. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000213071648.06692.00002091@ng-fx1.aol.com>
Source record: 63298

Didn't mean to start a flame war! I thought this might've been a specialized sort of thing...

Aint' tellin' what I have used to solve the problem.

As for being a geeky wighead- Yes, I am a geek, and probably could use a wig- the hairs are pretty sparse up there!

73
John

1188. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Larry Gauthier <larryg@ismi.net>
Message-ID: <38a6a989@news.ismi.net>
Source record: 63299

I missed the earlier discussion of this topic - what was the consensus? I have an MFJ roller inductor tuner that screams like a banshee when I crank the handle. Thought about spraying WD-40 on it but haven't yet...

What do people use?

-larry
wb8bgo
JPhelan501 wrote in message
<20000213071648.06692.00002091@ng-fx1.aol.com>...
>Didn't mean to start a flame war! I thought this might've been a
specialized
>sort of thing...
>
>Aint' tellin' what I have used to solve the problem.
>
>As for being a geeky wighead- Yes, I am a geek, and probably could use a
wig-
>the hairs are pretty sparse up there!
>
>73
>John

1189. FS: Eimac 8252/4PR60C

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: arnoldg@sf.telia.no
Message-ID: <38a6a806.207765@news.telia.no>
Source record: 63300
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I have four pcs EIMAC 8252/4PR60C for sale. The valves are NOS and in original boxes. 8252 is the same as 715C and 5D21, but an upgraded version. Heater 25.5V 2.35A Pa 60W Va max 20KV Ia max 18A (pulse operation)
This valve is usually very expensive, but I'll sell it for US$ 100.-/each

Regards,

Arnold Goks yr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267

Valves, sockets, transformers, books and components
Good stock on all types. We ship worldwide.

1190. FS: IF-amp AM-427 A/U

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: arnoldg@sf.telia.no
Message-ID: <38a6c073.6461678@news.telia.no>
Source record: 63301
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I got a lot of these - about 75 - 80 I think. They have a B7G socket
and is about the same size as a 6AQ5 valve. All metal. Yellow colour.
The label says:
IF AMPLIFIER AM-427 A/U
FISHER RADIO CORPORATION
U.S.

They are new (or rather unused) and in original boxes. I really don't
need them myself, but maybe there is anyone out there who do?
E-mail me if interested.

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267

Valves, sockets, transformers, books and components
Good stock on all types. We ship worldwide.

1191. Re: NEED INFO ABOUT EIMAC 8930 TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <OTzp4.41988$ox5.10818478@tw11.nn.bcandid.com>
Source record: 63302

In article <9RQn4.95$lD3.881758@nnrp3.proxad.net>, seca4all@altern.org says...
>
>Hi every body
>I' need some information about the vacuum tube Eimac 8930,
>plate voltage , grid bias voltage ... schematics ..all that you know can
>help me so please write me to
>ipas.m@netclic.fr
>
This is easy. As the one responder has said, download the catalog. However, it is even easier than that. The 8930 is identical electrically in every way to the 4CX250R. The ONLY differance is the larger plate radiator diameter that allows more airflow with less backpressure. The 8930 is rated as a 350 watt dissapation tube.

Even over there in france you can find the specs for the 4CX250R. Check out the R.S.G.B. handbook.
73 Gummi

1192. Re: WTB: NOS TUBES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <887f3afpa1@nnrp1.deja.com>
Source record: 63303

In article <38A58439.E8BE210E@erols.com>,
bluestat@erols.com wrote:
> Looking for large or small quantities of the following NOS (preferably
> in
> original boxes) tubes.
>
> 6V6GT, 6L6GC,EL37, 5AR4/GZ34, 5Y3GT, 5R4, 5V4, 6K6GT, 6CA7/EL34,
> 6BQ5/EL84, 7189A, 7027,
> 7591A, 7581A, 12AX7A/ECC83, 5751, 12AY7/6072, 7025, 12AT7, 7199, 5881,
> 6550,
> 7868, KT-66,77,88.
>
> Also, octal socket extenders/savers.
>
> Please list brand, price, qty available, and whether in
> original box.
>
> Thanks,
> Mike
> 703-430-8713
> bluestat@erols.com
>
>

For the tubes try http://www.tubeworld.com/tubes.html
For sockets, http://www.vacuumtubes.com/tubeskt.html
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1193. HUD

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Lei <KSHADO13@concentric.net>
Message-ID: <38A6E8D0.D6F2F268@concentric.net>
Source record: 63304

Hello,
Does anyone know how to go about constructing a Heads Up Display for an automobile?????
Lei

1194. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <MNBp4.10102$TS5.223767@news6.giganews.com>
Source record: 63305

Don't overlook Mouser, they are on the web, have a huge assortment of parts,
a free catalog and NO MINIMUM ORDER, plus shipping is actual UPS charges!

73 de Jack

Laura Halliday wrote in message <38A62362.8C668541@sympatico.ca>...
>CessnaPilot@webtv.net wrote:
>>
>> I've been away from building for awhile and it seems Lafayette, Knight,
>> Allied and the others have evaporated. Rat Shak doesn't supply enough
>> to build a GDO coil. Where do you guys buy your components these days?
>> I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
>> resistor and a 1000 picofarad capacitor. I might as well try to get
>> anti-matter crystals for the Enterprise! Surely there is one supplier
>> left???? TNX, Johnny
>
>My troll alarm is dangerously close to going off (Allied? Knight? Where
>*have* you been?), but for what it's worth, I spend my parts dollars at:
>
> - local (Toronto) suppliers like Active Surplus and Sayal
> - Digi-Key for much of the rest
> - Newark for first-order exotica (e.g. Analog Devices)
> - Downeast Microwave and Mainline for RF stuff
> - specialist suppliers like Mini-Circuits
> - scrounge the rest wherever I can get it; try to score
> samples of really weird stuff
>
>Sure, there are minimum orders. That's how the business works
>these days. Like others have mentioned, save up until you
>have a minimum order ready to go, and be prepared to stock up
>on essentials (there is little point in buying .1 uF capacitors
>in quantities of less than 100). When looking to pad an order
>I also look for interesting things that I might not otherwise
>buy on a "what the heck!" basis. Some of them have proven useful.
>--
>Laura Halliday VA3LDH "Laisse le vent tout emporter..."
>Grid: FN03gs - Foly/Viennet

1195. Re: HUD

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <OryaIrkd$GA.318@cpmsnbbsa03>
Source record: 63306

Lei wrote in message <38A6E8D0.D6F2F268@concentric.net>...
>Hello,
>Does anyone know how to go about constructing a Heads Up Display for an
>automobile?????
>Lei
>

Sorry, I couldn't let this one pass: In the Memphis area we have the largest assemblage of bad drivers in the known universe.Because of where most of these bad drivers keep their heads while in motion, a proctoscope would be considered a Heads Up display!!!

Mike Lucas W5CHR
Memphis, Tenn

1196. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38A6FDB2.B3D8F772@ix.netcom.com>
Source record: 63307

Lyle Kraft wrote:

> CessnaPilot@webtv.net wrote:
> : > I've been away from building for awhile and it seems Lafayette, Knight,
> : > Allied and the others have evaporated. Rat Shak doesn't supply enough
> : > to build a GDO coil. Where do you guys buy your components these days?
> : > I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
> : > resistor and a 1000 picofarad capacitor. I might as well try to get
> : > anti-matter crystals for the Enterprise! Surely there is one supplier
> : > left???? TNX, Johnny
>

About 75 or so parts suppliers at URL:
http://www.ac6v.com/pageaaa.html

50 or so Kits at URL:
http://www.ac6v.com/pageay.html

Solder em up!

73 From Rod In San Diego

AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 565,000 visits on the counter
http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

1197. Re: Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a73d0a.14053356@news.online.no>
Source record: 63308

On Sun, 13 Feb 2000 04:19:22 GMT, rcnixon@mindspring.com (Russell C. Nixon) wrote:

>
>Jan-Martin,
>
> Is that a switcher or a really big secondary on the
>transformer? Note that there was a two ot three-part article in QST
>lat year or so for a hefty switching supply. You even get to wind
>your oun transformers.
>
>Russ - KF4WXD
>
sorry, no I don't like to wind my own transformers - particularly - since I never get the proper cores and flat wire

1198. Re: Feds Raid Ramsey - discussion board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a73dba.14229440@news.online.no>
Source record: 63309
Cross-posted to:
rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc,rec.radio.scanner,rec.radio.amateur.shortwave

On Sun, 13 Feb 2000 06:36:23 GMT, acatalan@pipeline.com (Tony) wrote:

>In Germany they had an "official" radio set to RX a single
>channel. If you were to break the seal or modify it in any way
>the penalty was DEATH.
not DEATH but you might have to stay in prison, provided some of your
neighbours mentioned that you listened to foreign broadcasters. It
wasn't single channel radio, but tuning might need a tool

1199. Re: Soldering/Homebrewing using surface MOUNT components ..ie chip capacitors..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38A75DF0.6165@pop.removethistomailme.net>
Source record: 63310

earlve3ab@igs.net wrote:
>
> I bought some chip capacitors in the bargain bin at the electronics
> store..Im wondering how an amateur homebrewer could use them..they
> are good RF Values ie 150 pf 330 pf and rated at 50 volts BUT they
> are very small of course! Any recommendations? I might think of trying
> my 25 watt soldering iron with a delicate approach. Im thinking of
> using these little guys in a rcvr front end filter project with small
> torroids to make a small ..compact unit...73 Earl VE3AB

If you use PC boards, there's nothing special you need to do -- just
solder the cap down one end at a time, perhaps holding it in place with
a toothpick. Otherwise, if you're not mounting them flat on a board,
the thing to remember is that their ability to withstand force applied
to their terminals is absolutely ZERO. Once you solder a chip cap into
a circuit using dead-bug construction, you've got to be careful not to
bend the leads attached to it at all.

Use a clean, hot iron with a small tip when hand-soldering these
puppies.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1200. Re: 2.4GHz microstrip line-coupled filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Peter Bolch <nc-bolchpe@netcologne.de>
Message-ID: <888468$8vn$1@news.netcologne.de>
Source record: 63311

<slug@aeminium.dhis.dee.uc.pt> schrieb in im Newsbeitrag:
8814rt$876$1@bbs.aeminium.pt...
> Hello again (see my midland message ;)
>
>
> any tips about building a bandpass filter like this? I have several
> sources of information but none tells how to calculate the distance
between
> the lines.
>

In "UKW Berichte" 2/96 (maybe also in the 2/96 English issue
"VHF-Communication") the calculations for a 1700 MHz coupled line bandpass
filter are described in detail. The author uses CalTech's cheap microwave
CAD software PUFF for calculation and simulation.

I'm not quite sure but the shareware filter synthesis program FAYSIN
(http://members.aol.com/faisyn/faisyn.htm) could also be used to calculate
line coupled bandpass filters. The programm's ouput is in PSPICE, TOUCHSTONE
and
MMICAD format.

Peter

1201. all you want to know !!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: PD2BVH <pd2bvh@qsl.net>
Message-ID: <884r4f$3phk9$1@reader2.wxs.nl>
Source record: 63389
Cross-posted to: alt.ham-radio.mods,alt.ham-radio.ssb,alt.ham-radio.vhf-uhf,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.space,uk.radio.amateur

http://www.qsl.net/pd2bvh
http://www.qsl.net/pd2bvh/links.htm

--

73 55 and good DX.

Homepage: http://www.qsl.net/pd2bvh

E-mail:
pd2bvh@amsat.org
pd2bvh@qsl.net
inteross@planet.nl
PD2BVH.nl@12move.nl

1202. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: lkraft@rose.hp.com
Message-ID: <884uh4$s1q$1@web1.cup.hp.com>
Source record: 63390

CessnaPilot@webtv.net wrote:
: > I've been away from building for awhile and it seems Lafayette, Knight,
: > Allied and the others have evaporated. Rat Shak doesn't supply enough
: > to build a GDO coil. Where do you guys buy your components these days?
: > I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
: > resistor and a 1000 picofarad capacitor. I might as well try to get
: > anti-matter crystals for the Enterprise! Surely there is one supplier
: > left???? TNX, Johnny

I can usually find what I what from at least one of these guys:

http://www.allied.avnet.com/
http://www.tubesandmore.com/
http://www.em.avnet.com/cgi-bin/sc.cgi
http://www.bgmicro.com/
http://www.jcaelectronics.com/
http://www.arrowamericas.com/
http://www.dse.com.au/
http://www.digikey.com/
http://www.exchangecomponents.com/
http://www.future.ca/
http://audiolab.home.mindspring.com/
http://www.hh.avnet.com/
http://www.jameco.com/
http://www.jdr.com/scripts/jdr.exe
http://lafayetteelecsup.com/
http://www.marshall.com/
http://www.marvac.com/
http://www.mouser.com/
http://www.newark.com/
http://www.pacificsemi.com/
http://www.penstock.avnet.com/
http://www.rfparts.com/
http://www.rocelec.com/
http://www.time.avnet.com/
http://support.tandy.com/
http://www.wyle.com/

L

1203. Re: Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a5ebda.543126895@news.online.no>
Source record: 63391

On Sat, 12 Feb 2000 16:02:56 -0600 (CST), chocalatejay@webtv.net (CASH MONEY) wrote:

>EMAIL ME IF YOU KNOW OF ANYONE!
>
I built 13.5V 45A DC PSU - have the circuit saved as gif file -
is that large, or do you need 2000V 5A ?

73 jan-martin

1204. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: nobody@nowhere.com
Message-ID: <yjop4.3943$s02.113792@nnrp3.clara.net>
Source record: 63392
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Gary Coffman KE4ZV writes
>Autosketch is *much* cheaper than AutoCad. $99 as I recall.
>In some ways it is even a better program than its big brother.

For uk people,
Autosketch 5 can be obtained for a fiver at the moment, its on
one of the CD's with this months PC Plus magazine.
Havn't installed it yet but claims to be the full product.

1205. Help! DG4RBF Synthesizer UKW-Berichte

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: john nieuws <jg.nieuwerth@quicknet.nl>
Message-ID: <apop4.3469$ls1.137227@amoeba1.soneraplaza.nl>
Source record: 63393

Hi,

anyone who has build DG4RBF HF-Synthesizer 5...1450 MHz published in
UKW-Berichte 3/96 ??

I have build this, but i'm experiencing trouble with the micro-controller
section. At the startup procedure there appears to be going something wrong
as the controller does'nt write data to the LCD-display. I can start it up
by making pin28 of the 80C535 low. But then i have to program at each
start-up all of the stored data in the S-RAM chip which contains information
about power-levels from across the band.

73's
- John Nieuwerth
Email: pe1lon.john@quicknet.nl

- http://home.soneraplaza.nl/qn/prive/jg.nieuwerth/

1206. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-13 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38A62362.8C668541@sympatico.ca>
Source record: 63394

CessnaPilot@webtv.net wrote:
>
> I've been away from building for awhile and it seems Lafayette, Knight,
> Allied and the others have evaporated. Rat Shak doesn't supply enough
> to build a GDO coil. Where do you guys buy your components these days?
> I tried to get some simple stuff: a 250 Ohm carbon pot, a 10 Ohm
> resistor and a 1000 picofarad capacitor. I might as well try to get
> anti-matter crystals for the Enterprise! Surely there is one supplier
> left???? TNX, Johnny

My troll alarm is dangerously close to going off (Allied? Knight? Where
have you been?), but for what it's worth, I spend my parts dollars at:

- local (Toronto) suppliers like Active Surplus and Sayal
- Digi-Key for much of the rest
- Newark for first-order exotica (e.g. Analog Devices)
- Downeast Microwave and Mainline for RF stuff
- specialist suppliers like Mini-Circuits
- scrounge the rest wherever I can get it; try to score
samples of really weird stuff

Sure, there are minimum orders. That's how the business works
these days. Like others have mentioned, save up until you
have a minimum order ready to go, and be prepared to stock up
on essentials (there is little point in buying .1 uF capacitors
in quantities of less than 100). When looking to pad an order
I also look for interesting things that I might not otherwise
buy on a "what the heck!" basis. Some of them have proven useful.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

1207. Tx/Rx construction HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Des Bromilow <des.bromilow@citec.com.auV2>
Message-ID: <38A73176.45D9A8D1@citec.com.auV2>
Source record: 63312

Hi,

Can someone direct me to a construction resource for the construction of
a Tx/Rx pair (AM or FM) with crystal frequency control. OR..
can someone outline a block overview of a suitable Tx. I have a basic
understanding of Superhet AM Rx, and I have an understanding of VCO/PLL
FM detection/modulation, but the Tx component is my weak part. I have
access to Harry's (sm0v-you know who I mean) web page, but not being
sure which building blocks to use or modify, makes it a little hard to
proceed.

What am I trying to do? Build a Tx/Rx pair which will have a data
in/data out pin on the Tx/Rx respectively, which I can use for R/C and
data experiments. I envisage something in the order of 300-500 mW, and
the frequencies would be in the 27-40 MHz areas (Both Rx and Tx set by
crystal)

I would appreciate any assistance or guidance people can offer on this.
Thanks,
Des bromilow
Email replies to des.bromilow@citec.com.au are most appreciated.
--
Des Bromilow
Queensland Rocketry Association
Brisbane
Australia
"Inner Child" be darned... I'm having WAY too much fun rediscovering
my "Inner Teenager"!!! dyb 11/2/99
Email addresses: des.bromilow@citec.com.auV2 and
desbromilow@primus.com.auV2
remove the German anti-spam device before replying.

1208. Re: Roller inductor lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38A73EAE.94E55379@webaxs.net>
Source record: 63313

For sliding surfaces, dry-lube is good (a wax stick like a candle).

There is also a conductive grease in existence for this type of thing.

Larry Gauthier wrote:
>
> I missed the earlier discussion of this topic - what was the consensus? I
> have an MFJ roller inductor tuner that screams like a banshee when I crank
> the handle. Thought about spraying WD-40 on it but haven't yet...
>
> What do people use?
>
> -larry
> wb8bgo
> JPhelan501 wrote in message
> <20000213071648.06692.00002091@ng-fx1.aol.com>...
> >Didn't mean to start a flame war! I thought this might've been a
> specialized
> >sort of thing...
> >
> >Aint' tellin' what I have used to solve the problem.
> >
> >As for being a geeky wighead- Yes, I am a geek, and probably could use a
> wig-
> >the hairs are pretty sparse up there!
> >
> >73
> >John

--

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *

1209. Soldering/Homebrewing using surface MOUNT components ..ie chip capacitors..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <38a74883.76844568@news.igs.net>
Source record: 63314

I bought some chip capacitors in the bargain bin at the electronics store..Im wondering how an amateur homebrewer could use them..they are good RF Values ie 150 pf 330 pf and rated at 50 volts BUT they are very small of course! Any recommendations? I might think of trying my 25 watt soldering iron with a delicate approach. Im thinking of using these little guys in a rcvr front end filter project with small torroids to make a small ..compact unit...73 Earl VE3AB

1210. Re: Viz microsonde units ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Bobby Atkinson <bobbys@prodigy.net>
Message-ID: <01bf7683$479c9260$0100a8c0@ZTU>
Source record: 63315

I saw them on ebay, I went to the mfg site and found some
useful info.

Keith E. Spainhour <KSpainhour@wilkes.net> wrote in article
<38A217D6.F2DBEBB9@wilkes.net>...
> Hello,
> I recently bought some Viz Microsonde II radiosonde units.
> Does anybody have any info. on these units, data formats,
> schematics,??? I have found a few basics on the web, but
> nothing technical. Any help would be appreciated.
>
>
> --
> 73 DE KT4XW
> Keith Spainhour
> KSpainhour@wilkes.net
>

1211. Re: Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000213203203.28335.00003482@ng-cd1.aol.com>
Source record: 63316

How big?

1212. Marconi EHT half bridge rectifier HTZ 24B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Frank Dinger <gm0csz.kn6wh@invertain.freeserve.co.uk>
Message-ID: <887o9q$6r3$1@newsg4.svr.pol.co.uk>
Source record: 63317

Recently I purchased from a surplus dealer 4 pcs Marconi - Lincoln , EHT rectifier ,model HTZ 24B

It is a half bridge (hence 2 units form a full bridge rectifier)
When increasing the forward bias voltage a current commences to flow when voltage is 12.4 V or 6.2V for half the unit . This suggests that inside the moulded unit are 2*(8 or 9) silicon diodes ,meaning that if the PIV for each diode would be 1000V ,the PIV for 1 rectifier leg is 8000 - 9000 V
The model happily survives a constant current of 500 mA - DC.

Marconi -Lincoln is now named Mitel Semiconductors

Can someone perhaps identify this rectifier and provide info on specified PIV and current rating.
It is my intention to use the units in the HV power supply unit for a HF RF power amp.

TIA Frank gm0csz.kn6wh@ukrs.org

1213. LQQK----> Equipment 4 Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: radiodoc37@aol.com
Message-ID: <20000214003728.26431.00003330@ng-fs1.aol.com>
Source record: 63318

----> Equipment For Sale <------

Yaesu FTDx560 HF Tube Transceiver 10-80 meters,
plastic still on faceplate, excellent condition
with copy of manual $250.00

Yaesu XF-32A SSB filter for FT101 series, $40.00

Crown IC-150 Stereo preamplifier, Metal cabinet
model with copy of manual $150.00

Midland 79-290, removeable face 10/11 meter AM/SSB/WX
Mobile,dual final design, 5 bands, WX, good condition with
stock mic. $120.00

Commercial VHF Handhelds:
Motorola Radius P50
Kenwood TK240 with drop in charger
Reasonable offer

Homebrew 3 tube 10 meter amplifier, uses 3 military
versions of the 6146, Seperate open chassis PA and
power supply deck. RF sensing, Plate Load, meter, SSB
and AM. 150-200 watts with low drive $150.00

Browning Mark III, AM transmitter and 2 AM/SSB receivers, working.
With 2 non-working parts AM/SSB transmitters and 1 non working
AM/SSB receiver. Complete Package $400.00

Tram D201s, Both have unlocked VFO's, One has lower freqs
with good AM and weak SSB the other has upper freqs with good
AM and SSB. Both in good condition $250.00 Each

See More Equipment for sale with pics at:

http://members.aol.com/radiodoc37/indexdoc.html

Modified components to build your own Rife-Bare
Resonant Frequency Therapy Machine, Modified
ISM transmitter, Modified Class C amplifiers,
and a variety of Plasma Tubes. Built and tested
systems available.
To Learn about Plasma Wave Therapy See My site:

http://www.medicineofthefuture.com

All items shipped UPS ground after reciept
of MO Or cleared Ca. Check.

Thanks
Mike N6KYD (805) 526-5487

1214. Valve AC voltmeter FS (UK)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Trumpet One <trumpet.one@virgin.net>
Message-ID: <888pba$2fs$1@nclient11-gui.server.virgin.net>
Source record: 63319
Cross-posted to: alt.ham-radio.marketplace,rec.antiques.radio+phono,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,relcom.radio.ham,uk.radio.amateur,uwarwick.societies.amateur-radio

I am selling a Hewlett Packard vacuum tube AC voltmeter. It is being
auctioned on eBay and the starting price is very very affordable!!!
Full details and pictures are at:
http://cgi.ebay.co.uk/aw-cgi/eBayISAPI.dll?ViewItem&item=260035348

1215. FM828 Mods for 6 meters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38a7f21a.2300150@news.m.iinet.net.au>
Source record: 63320

I have an old A band FM828 which I want to use on 50 MHz.
Anyone have sources for the circuit and mods to do this?
In particular the mods to the PA board.

Thanks
Richard hosking

1216. Diode Mixers and DC receivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38a7fb5a.4668186@news.m.iinet.net.au>
Source record: 63321

Gday All
I am looking for info on using diode mixers in direct conversion phasing receivers and SSB generators.
Has anyone got experience in this?
In particular, how to terminate the mixer and bilateral audio switching/amplifier schemes so that one set of mixers is used for transmit/receive

Richard Hosking

1217. Problem with noise blanker on TS-440S

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Mike <ki5mp@DOTDOT.arrl.net>
Message-ID: <dpTp4.5501$39.239549@news.corecomm.net>
Source record: 63322
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Greetings everyone.

I have an intermittent problem with the noise blanker on my Kenwood TS-440 and was wondering if anyone could shed some light on it for me.

I have a Chevy AstroVan with lots of ignition noise (comes in through the antenna). I'm running a Hustler antenna with three resonators - 80M, 40M, and 10M. I haven't spent a lot of time really getting to the root of the problem by eliminating the source because the noise blanker on the TS-440 has been working quite well - until recently that is. On 40 meters the noise blanker works sometimes and sometimes it doesn't. The s-meter reading on the noise level on 40M is an S-9. Depressing the noise blanker button sometime wipes the noise completely out and sometimes it doesn't do a darn thing - making weak stations completely unreadable. On 80M, the noise level is a S-7 and the noise blanker consistently does a good job of cutting it out. On 10M, the noise level is about a S-4 and the noise blanker also consistently does a good job of cutting it out. The intermittent problem only appears on 40M.

Does anyone have an idea what may be going on?

Thanks in advance for any help.

73s

Mike
KI5MP
ki5mp@DOTDOT.arrl.net

remove DOTDOT. from e-mail address to respond via e-mail

1218. Re: Problem with noise blanker on TS-440S

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <xuWp4.9725$Cn1.275368@news5.giganews.com>
Source record: 63323
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Mike, the performance of the noise blanker depends greatly on the character of the noise. It works best on tall narrow spikes. Apparently on 40 meters the spikes are wider, or they are accompanied by other noises that the blanker can't handle.

It doesn't seem there is anything wrong with the noise blanker, just that your vehicle needs attention.

An idle opinion from an old timer who has been there, and who also runs a TS-440S mobile from time to time. But then I probably have a better designed car; I don't think too much of American made vehicles. That's another idle opinion, don't take it personally.

73, Bob K6DDX

1219. 4CX-800

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: w5rg@swbell.net
Message-ID: <38A85F16.BD6D5589@swbell.net>
Source record: 63324

Does anyone have a good diagram for useing this
tube in a AMP?? I have been looking and can't
find any..I know Alpha,QRO and a few others are
making AMPS with this tube...Thanks Bob

1220. An Idea for Direct conversion FM data....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <38A8669A.AF4330AA@Rasdoc.com>
Source record: 63325

I'm working on building a truly tiny FM telemetry transceiver.
I want it to inter operate with standard APRS equipment, like the
Kenwood H7A.
So the system has to operate on 1200 Baud AFSK.

This system has two AFSK tones of 2200 Hz and 1200Hz.

I like the simplicity of a direct conversion receiver a whole lot.
If I set the LO = to the center frequency, then as the FM deviation
occurs
the frequency will be reflected around zero.
If I then slope detect the result it will appear that my input signal
has been full wave rectified.

So my 2200Hz tone will appear at 4400 and my 1200 at 2400.

In addition I can induce a small 50Hz deviation in my LO that I can
synchronously peak demodulate to do AFC on the LO.

I believe that I can make all of this run in a small uP or DSP.

Will this work?

Any comments?

Paul (Kl7JG)

1221. Re: Soldering/Homebrewing using surface MOUNT components ..ie chip capacitors..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: "David Knaack(spam blocked email)" <dknaack@n0spann.rdtech.com>
Message-ID: <8L_p4.2508$A34.45196@news.swbell.net>
Source record: 63326

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:38A75DF0.6165@pop.removethistomailme.net...
> earlve3ab@igs.net wrote:
> >
> > I bought some chip capacitors in the bargain bin at the electronics
> > store..Im wondering how an amateur homebrewer could use them.
>
> Use a clean, hot iron with a small tip when hand-soldering these
> puppies.

I've found that applying flux to the surfaces makes mounting
SMT components much easier. The flux in the solder just doesn't
help much.

DK

1222. Help: VFD driver chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: ns.ve1jfa@rac.ca
Message-ID: <ns.ve1jfa-1402001838050001@ts2-d24.mby.auracom.com>
Source record: 63327

I need some info on two vacuum fluorescent driver chips. I have searched the web and have put a message on sci.electronics.components but have had no replies. So I am turning to the ham radio community where I have found help in the past.

The first driver chip is numbered 10938P-50 and also 10940-16. The second driver chip is numbered 10939P-50 and also 10939-11. I think the logo on the chips is Rockwell.

The drivers are on a board that I would like to use in a project. It contains a 1 line x 20 character (5 x 7 dots) Vacuum Fluorescent Display, the driver chips, and circuits to create the required voltages.

Can anyone supply info on these two driver chips?

--
Jeff

To reply, remove "ns." from my email address.

1223. need circuit for cat interface

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: a f mason <gw0tkx@ic24.net>
Message-ID: <0r%p4.21554$M47.210446@news1-hme0>
Source record: 63328

wanted circuit diagram for cat interface ft767gx
can anybody help??

1224. Re: Diode Mixers and DC receivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38a88baa.99730919@news.online.no>
Source record: 63329

On Mon, 14 Feb 2000 12:59:42 GMT, richardh@iinet.net.au (Richard Hosking) wrote:

>Gday All
>I am looking for info on using diode mixers in direct conversion
>phasing receivers and SSB generators.
>Has anyone got experience in this?
>In particular, how to terminate the mixer and bilateral audio
>switching/amplifier schemes so that one set of mixers is used for
>transmit/receive
>
>Richard Hosking
have some experience using anti-paralell subharmonic mixers, but is it possible to use them for phased mixers for SSB generation?

73 jan-martin LA8AK

1225. Re: Diode Mixers and DC receivers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <88aohpceh1@vax.area.com>
Source record: 63330

In article <38a88baa.99730919@news.online.no>,
J M Noeding <LA8AK@Online.NO> wrote:
>>
>have some experience using anti-paralell subharmonic mixers, but is it
>possible to use them for phased mixers for SSB generation?
>
>73 jan-martin LA8AK

Yes it is. A long time ago I built an image reject (IOW, SSB) mixer with an IF of 4 MHz and an RF frequency of 1.3 GHz. The LO was 652 MHz and the mixers used anti-parallel diodes as described in an old Ham Radio Mag article. The 2nd harmonic mixing did not interfere with the image reject operation at all. In those days, you couldn't get a prescaler that worked at 1.3 GHz for the PLL.

Rick Karlquist N6RK
rick@area.com

1226. Re: murata ceramic filters: where to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <88aopf$cl3$1@vax.area.com>
Source record: 63331

In article <20000214200548.26295.00003317@ng-cn1.aol.com>,
Ax9909 <ax9909@aol.com> wrote:
>looking for a source of murata ceramic if filters. have not been having any
>luck finding a vendor who can supply in small lots, 1,2 or 3 at a time. i have

I went through this before, and Murata in small qty is a forget it.
Try Toko via DigiKey.

Rick Karlquist N6RK

1227. Re: An Idea for Direct conversion FM data....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <88aou0$cu0$1@vax.area.com>
Source record: 63332

In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com> wrote:
>I'm working on building a truly tiny FM telemetry transceiver.
>I want it to inter operate with standard APRS equipment, like the
>Kenwood H7A.
>I like the simplicity of a direct conversion receiver a whole lot.
>If I set the LO = to the center frequency, then as the FM deviation
>Any comments?

You ought to look at direct conversion FSK pager receiver designs,
like the ones they use in watch pagers. Two mixers in quadrature, LO
at the midpoint of mark and space frequencies, and a D-flip flop
is all you need.

Rick Karlquist N6RK

1228. Re: An Idea for Direct conversion FM data....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: John Sonnenberg <johnsonnenberg@csi.com>
Message-ID: <0e7q4.1$wi5.89@news.connectnet.com>
Source record: 63333

As Rick says, a paging receiver is a simple architecture. I think Phillips makes some
nice direct-conversion ICs. You can also use the RX LO for your TX signal.
I think the PCB layout is more critical when doing a direct conversion receiver, so
you still may consider a dual-conversion.
If you really need AFSK TX and RX, then the design is a bit more complex than just FSK of the RF.
Either approach can be done with a simple CPU, although the use of a DSP would
allow much more room for increasing performance by improving algorithms.
If its a one-off project, I'd use a Phillips dual conversion integrated RX IC with a Exar AFSK modem chip, and skip the CPU.
Good luck,
John Sonnenberg
WB9QBF

Richard Karlquist wrote in message <88aou0$cu0$1@vax.area.com>...
>In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com> wrote:
>>I'm working on building a truly tiny FM telemetry transceiver.
>>I want it to inter operate with standard APRS equipment, like the
>>Kenwood H7A.
>>I like the simplicity of a direct conversion receiver a whole lot.
>>If I set the LO = to the center frequency, then as the FM deviation
>>Any comments?
>
>You ought to look at direct conversion FSK pager receiver designs,
>like the ones they use in watch pagers. Two mixers in quadrature, LO
>at the midpoint of mark and space frequencies, and a D-flip flop
>is all you need.
>
>Rick Karlquist N6RK

1229. Re: Soldering/Homebrewing using surface MOUNT components ..ie chip capacitors..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-14 00:00:00 UTC
From: Jim Pennell <no-sapm@spam.com>
Message-ID: <88b05b$ej4$1@nntp9.atl.mindspring.net>
Source record: 63334

I've had good luck using perf board... Get the 1/10 inch centers with
copper donuts around each hole.

I find them at Radio Shack for a reasonable price.

If you position the surface mount resistor, or capacitor carefully, you
can solder it to seperate donut pads.

This is very convenient in that I can then add another surface mount part
from that same pad to another one to build up the circuit.

Or, insert a through hole IC from the non-copper side, and use small gauge
bus wire to connect the pins of the IC to the surface mount part next to it.

The net effect is, an easy semi "PCBOARD" prototype with the bus wire
serving as trace connections between the surface mount parts.

All in all, I find it just about as easy as a through hole prototype, and
a heck of a lot smaller finished product !!!

True, I do have to spend some time working out an approximate parts
placement, before assembly, but it is fast and allows using the small
surface mount parts even in a one off breadboard.

Jim Pennell

jpennell

at ix dot netcom dot com

1230. 10GHz stuff for sale on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Anon O'Moose <Sean@home.org>
Message-ID: <2b1iasckrioanstn1rnnp13i2h5pcbrmbr@4ax.com>
Source record: 63195

I hope this won't really be looked at as SPAM. I just want to let you microwavers out there know about the box of misc. microwave parts and units I have up for sale on eBay.

I have 2 working 10GHz units and many parts for sale in a sort of parts box.

If you are interested, stop by. I want to move these things out of the shack as there seems to be little interest in uWaves here in Central Ohio.

Thanks,
KB8JNE

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=259987203

1231. 4cx-800a tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: w4th@webtv.net
Message-ID: <2700-38A94F11-11@storefull-107.iap.bryant.webtv.net>
Source record: 63196

I have for sale 4cx-800a Svetlana tubes. These are new tubes. Price is $110.00 each plus shipping, and $100.00 each plus shipping when buying a pair. I will guarantee these tubes, and I will sell larger numbers for lower prices. Be sure to mention the price I have quoted here as this is the first time I have offered these tubes at this low price.
73
Tom Hix
W4TH

==========
Be sure to visit my web sites.

Amateur radio amp tubes.
http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html

Ham Radio Homepage.
http://www.geocities.com/Heartland/Woods/6222/

1232. Re: VFO Stabilizer/Frequency Counter Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38a95ada.689130@news.m.iinet.net.au>
Source record: 63197

On Tue, 15 Feb 2000 05:07:50 GMT, richardh@iinet.net.au (Richard Hosking) wrote:

>
>>Available now borads and controllers for this project
>>
>>see http://www.iinet.net.au/~richardh/vfostab.htm
>>
>>Count to 30 MHz 10Hz resolution
>>Interfaces to 16 by 2 LCD displays
>>16 user settable offsets +/- to 10 Hz
>>PLL VFO stabilizer automatic lock invisible to the user.
>>
>>Board PTH/masked/overlay
>>Programmed controller Atmel AT90S1200
>>
>>Board+micro AUS$35.00 P+P $3.00
>>
>>E mail me at richardh@iinet.net.au
>

1233. Re: An Idea for Direct conversion FM data....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <38A95E25.C4F7C9C@Rasdoc.com>
Source record: 63198

>
> As Rick says, a paging receiver is a simple architecture. I think Phillips
> makes some
> nice direct-conversion ICs. You can also use the RX LO for your TX signal.
> I think the PCB layout is more critical when doing a direct conversion
> receiver, so
> you still may consider a dual-conversion.
> If you really need AFSK TX and RX, then the design is a bit more complex
> than just FSK of the RF.
> Either approach can be done with a simple CPU, although the use of a DSP
> would
> allow much more room for increasing performance by improving algorithms.
> If its a one-off project, I'd use a Phillips dual conversion integrated RX
> IC with a Exar AFSK modem chip, and skip the CPU.
> Good luck,
> John Sonnenberg
> WB9QBF
>
This is a packet data system, there HAS to be a CPU, so I thought I'd
make it
do as much as possible.

Also I was thinking using a single VCXO as both TX and LO source, so
the 50hz
shift to do AFC would be easy.

Paul

1234. VFO Stabilizer/Frequency Counter Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38A965D8.28CC283C@lafn.org>
Source record: 63199

Hi Richard,

I tried and failed to look at this web site.

73, W6MIK

============
From: richardh@iinet.net.au (Richard Hosking)
Subject: VFO Stabilizer/Frequency Counter Boards

>Available now borads and controllers for this project
>
>see http://www.iinet.net.au/~richardh/vfostab
>
>Count to 30 MHz 10Hz resolution
>Interfaces to 16 by 2 LCD displays
>16 user settable offsets +/- to 10 Hz
>PLL VFO stabilizer automatic lock invisible to the user.
>
>Board PTH/masked/overlay
>Programmed controller Atmel AT90S1200
>
>Board+micro AUS$35.00 P+P $3.00
>
>E mail me at richardh@iinet.net.au

1235. WORK FROM HOME

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: jaco10 <jaco10@earthlink.net>
Message-ID: <B7eq4.23731$S71.160603@newsread2.prod.itd.earthlink.net>
Source record: 63200

WORK FROM HOME

Exciting, yet simple program allows you to generate positive cash
flow while
mastering the basic fundamentals of Internet Marketing.

For more information, send a blank e-mail to :

Robo-cash@aweber.com

1236. Will this blow-up?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38A99F07.2CE65810@home.com>
Source record: 63201

I built a small "static" tube-tester which just measures the difference in plate current for a 1Volt change in grid bias. That's easy, I just change the pot in the control leg for a 1V change in output from an LM337.

To get a little more complicated, however, I was wondering if one could "modulate" an LM337 in its "adjustable" mode by lifting the control leg from ground and inserting a 1V RMS sine wave. I have done this to make an adjustable 0-30V negative supply simply by inserting a positive reference in the control loop. (As you know, the lower limit of the LM337 is -1.25 unless you insert +1.25).

How angry is the LM337 goint to be if it is modulated in this fashion? I was thinking of only a 1kHz sine wave.

Well, it's on to the breadboard.

1237. Re: VFO Stabilizer/Frequency Counter Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1502001131070001@dialup-1012.hip.cam.org>
Source record: 63202

In article <38A965D8.28CC283C@lafn.org>, af389@lafn.ORG (David Shalita) wrote:

> Hi Richard,
>
> I tried and failed to look at this web site.
>
> 73, W6MIK
>
But this works: http://www.iinet.net.au/~richardh/vfostab.htm

Michael VE2BVW

> ============
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> >Available now borads and controllers for this project
> >
> >see http://www.iinet.net.au/~richardh/vfostab
> >
> >Count to 30 MHz 10Hz resolution
> >Interfaces to 16 by 2 LCD displays
> >16 user settable offsets +/- to 10 Hz
> >PLL VFO stabilizer automatic lock invisible to the user.
> >
> >Board PTH/masked/overlay
> >Programmed controller Atmel AT90S1200
> >
> >Board+micro AUS$35.00 P+P $3.00
> >
> >E mail me at richardh@iinet.net.au

1238. (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: z002138b@bc.SEflin.ORG
Message-ID: <Pine.3.89.10002151115.A3940-0100000@bc.seflin.org>
Source record: 63203

```
unsubscribe ham-hombrew
```

1239. Re: Ham-Homebrew Digest V2000 #46

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: occ6@siscom.NET
Message-ID: <003e01bf77d5$25886b60$4a0afbd1@default>
Source record: 63204

try w1fb's design note book. get it at book stores or www.arrl.org $10 its a
good buy.
----- Original Message -----
From: Ham-Homebrew Mailing List and Newsgroup <Ham-Homebrew@ucsd.edu>
To: <Ham-Homebrew@ucsd.edu>
Sent: Tuesday, February 15, 2000 7:30 AM
Subject: Ham-Homebrew Digest V2000 #46

>
> Ham-Homebrew Digest Tue, 15 Feb 2000 Volume 2000 : Issue 46
>
> Today's Topics:
> 4CX-800 (2 msgs)
> An Idea for Direct conversion FM data.... (4 msgs)
> Car batteries; and the charging of (2 msgs)
> Diode Mixers and DC receivers (3 msgs)
> FM828 Mods for 6 meters
> Help: VFD driver chips
> Looking For a Home Built Big DC Power Supply.
> murata ceramic filters: where to buy? (2 msgs)
> need circuit for cat interface
> need manual for Eratron HFP 85012
> Non inductive resistors/sources
> PC BOARD LAYOUT PROGRAM FOR WINDOWS 95? (3 msgs)
> Soldering/Homebrewing using surface MOUNT components ..ie chip
capacitors.. (3 msgs)
> VFO Stabilizer/Frequency Counter Boards
>
> Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
> Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
> Problems you can't solve otherwise to brian@ucsd.edu.
>
> Archives of past issues of the Ham-Homebrew Digest are available
> (by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-homebrew".
>
> We trust that readers are intelligent enough to realize that all text
> herein consists of personal comments and does not represent the official
> policies or positions of any party. Your mileage may vary. So there.
> Loop-Detect: Ham-Homebrew:2000/46
> --
>
> Date: Mon, 14 Feb 2000 14:01:26 -0600
> From: w5rg@swbell.net
> Subject: 4CX-800

>
> Does anyone have a good diagram for useing this
> tube in a AMP?? I have been looking and can't
> find any..I know Alpha,QRO and a few others are
> making AMPS with this tube...Thanks Bob
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 13:02:40 +1100
> From: "wb" <willyacht@yahoo.com>
> Subject: 4CX-800
>
> just look in the handbooks for a 4cx250 or 350 circuit, it basically the
> same tube with higher plate dissipation.
> <w5rg@swbell.net> wrote in message news:38A85F16.BD6D5589@swbell.net...
> > Does anyone have a good diagram for useing this
> > tube in a AMP?? I have been looking and can't
> > find any..I know Alpha,QRO and a few others are
> > making AMPS with this tube...Thanks Bob
> > >
> >
> >
> > .
> >
> > ------------------------------
> >
> > Date: Mon, 14 Feb 2000 15:33:30 -0500
> > From: Paul Breed <Paul@Rasdoc.com>
> > Subject: An Idea for Direct conversion FM data....
> >
> > I'm working on building a truly tiny FM telemetry transceiver.
> > I want it to inter operate with standard APRS equipment, like the
> > Kenwood H7A.
> > So the system has to operate on 1200 Baud AFSK.
> >
> > This system has two AFSK tones of 2200 Hz and 1200Hz.
> >
> > I like the simplicity of a direct conversion receiver a whole lot.
> > If I set the LO = to the center frequency, then as the FM deviation
> > occurs
> > the frequency will be reflected around zero.
> > If I then slope detect the result it will appear that my input signal
> > has been full wave rectified.
> >
> > So my 2200Hz tone will appear at 4400 and my 1200 at 2400.
> >
> > In addition I can induce a small 50Hz deviation in my LO that I can
> > synchronously peak demodulate to do AFC on the LO.

>
> I believe that I can make all of this run in a small uP or DSP.
>
> Will this work?
>
> Any comments?
>
> Paul (Kl7JG)
> .
>
> ------------------------------
>
> Date: 14 Feb 2000 21:41:20 -0800
> From: rick@vax.area.com (Richard Karlquist)
> Subject: An Idea for Direct conversion FM data....
>
> In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com>
wrote:
> >I'm working on building a truly tiny FM telemetry transceiver.
> >I want it to inter operate with standard APRS equipment, like the
> >Kenwood H7A.
> >I like the simplicity of a direct conversion receiver a whole lot.
> >If I set the LO = to the center frequency, then as the FM deviation
> >Any comments?
>
> You ought to look at direct conversion FSK pager receiver designs,
> like the ones they use in watch pagers. Two mixers in quadrature, LO
> at the midpoint of mark and space frequencies, and a D-flip flop
> is all you need.
>
> Rick Karlquist N6RK
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 01:09:31 -0500
> From: "Carl R. Stevenson" <wa6vse@fast.net>
> Subject: An Idea for Direct conversion FM data....
>
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> "Richard Karlquist" <rick@vax.area.com> wrote in message
> news:88aou0$cu0$1@vax.area.com...
> > In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com>
> wrote:
> > >I'm working on building a truly tiny FM telemetry transceiver.
> > >I want it to inter operate with standard APRS equipment, like the
> > >Kenwood H7A.
> > >I like the simplicity of a direct conversion receiver a whole lot.

> > >If I set the LO = to the center frequency, then as the FM deviation
> > >Any comments?
> >
> > You ought to look at direct conversion FSK pager receiver designs,
> > like the ones they use in watch pagers. Two mixers in quadrature, LO
> > at the midpoint of mark and space frequencies, and a D-flip flop
> > is all you need.
> >
> > Rick Karlquist N6RK
>
> However, the pagers use a rather large modulation index to create a
> null at the carrier frequency, which maps to DC in the conversion to
> baseband ... that way they can AC couple and get around the DC
> offset problems caused by carrier self-mixing to DC which can be
> a major problem.
>
>
> - --
> Carl R. Stevenson - wa6vse
> <mailto:wa6vse@fast/net>
> <http://www.users.fast.net/~wa6vse>
> - --
> NCI-1052
> Executive Director, No Code International
> Fellow, The Radio Club of America
> Senior Member, IEEE
> Member, TAPR
> Member, ARRL
> - --
> Join No Code International! Hams for the 21st Century.
> Help assure the survival and prosperity of ham radio.
> <http://www.nocode.org>
>
>
> -----BEGIN PGP SIGNATURE-----
> Version: PGP for Personal Privacy 5.5.3
>
> iQA/AwUBOKjtl5e+N6+q84HiEQJpPgCfUNsNVYlszqDjWB8WYXWyuk9kV7kAoMAx
> VJ1r35VwzTL1VrdsH/gJbT03
> =KZJx
> -----END PGP SIGNATURE-----
>
>
>
> .
>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 23:27:26 -0800
> From: "John Sonnenberg" <johnsonnenberg@csi.com>

> Subject: An Idea for Direct conversion FM data....
>
> As Rick says, a paging receiver is a simple architecture. I think Phillips
> makes some
> nice direct-conversion ICs. You can also use the RX LO for your TX signal.
> I think the PCB layout is more critical when doing a direct conversion
> receiver, so
> you still may consider a dual-conversion.
> If you really need AFSK TX and RX, then the design is a bit more complex
> than just FSK of the RF.
> Either approach can be done with a simple CPU, although the use of a DSP
> would
> allow much more room for increasing performance by improving algorithms.
> If its a one-off project, I'd use a Phillips dual conversion integrated RX
> IC with a Exar AFSK modem chip, and skip the CPU.
> Good luck,
> John Sonnenberg
> WB9QBF
>
> Richard Karlquist wrote in message <88aou0$cu0$1@vax.area.com>...
> >In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com>
> wrote:
> >>I'm working on building a truly tiny FM telemetry transceiver.
> >>I want it to inter operate with standard APRS equipment, like the
> >>Kenwood H7A.
> >>I like the simplicity of a direct conversion receiver a whole lot.
> >>If I set the LO = to the center frequency, then as the FM deviation
> >>Any comments?
> >>
> >You ought to look at direct conversion FSK pager receiver designs,
> >like the ones they use in watch pagers. Two mixers in quadrature, LO
> >at the midpoint of mark and space frequencies, and a D-flip flop
> >is all you need.
> >>
> >Rick Karlquist N6RK
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 00:48:40 -0500
> From: "Chris Kelliing" <kellingc@erols.com>
> Subject: Car batteries; and the charging of
>
> I have a car battery that no longer has a battery, and thought it would do
> good as a emergency power supply. What I would like to do is use my
Astron
> power supply to keep the battery charged. Does anyone have some ideas or
> schematics for a protection circuit?

>
> Thanks,
> Chris Kelling
> N1WKO
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 08:27:58 -0000
> From: "Mike" <m.j.willis@rl.ac.uk>
> Subject: Car batteries; and the charging of
>
> Chris Kelliing <kellingc@erols.com> wrote in message
> news:88aotl$da2$1@bob.news.rcn.net...
> > I have a car battery that no longer has a battery
>
> What ?
>
> You can buy special battery chargers. The important thing is to stop
> charging when fully charged so you need a voltage limited supply. You also
> need to limit the charging current to avoid self destruction. In addition,
> you need to prevent the battery reverse charging the supply when the power
> is off. A strategically placed diode will do this but will drop up to 0.7V
> or so. There was a design in the ARRL handbook. You could also use a relay
> driven from the supplies supply.
>
> Can your Astron provide around 15-16V ? Does it have current foldback ?
>
>
> .
>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 12:59:42 GMT
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: Diode Mixers and DC receivers
>
> Gday All
> I am looking for info on using diode mixers in direct conversion
> phasing receivers and SSB generators.
> Has anyone got experience in this?
> In particular, how to terminate the mixer and bilateral audio
> switching/amplifier schemes so that one set of mixers is used for
> transmit/receive
>
> Richard Hosking
> .
>

> ------------------------------
>
> Date: Mon, 14 Feb 2000 23:13:07 GMT
> From: LA8AK@online.no (J M Noeding)
> Subject: Diode Mixers and DC receivers
>
> On Mon, 14 Feb 2000 12:59:42 GMT, richardh@iinet.net.au (Richard
> Hosking) wrote:
>
> >Gday All
> >I am looking for info on using diode mixers in direct conversion
> >phasing receivers and SSB generators.
> >Has anyone got experience in this?
> >In particular, how to terminate the mixer and bilateral audio
> >switching/amplifier schemes so that one set of mixers is used for
> >transmit/receive
> >
> >Richard Hosking
> have some experience using anti-paralell subharmonic mixers, but is it
> possible to use them for phased mixers for SSB generation?
>
> 73 jan-martin LA8AK
> .
>
> ------------------------------
>
> Date: 14 Feb 2000 21:34:49 -0800
> From: rick@vax.area.com (Richard Karlquist)
> Subject: Diode Mixers and DC receivers
>
> In article <38a88baa.99730919@news.online.no>,
> J M Noeding <LA8AK@Online.NO> wrote:
> >>
> >have some experience using anti-paralell subharmonic mixers, but is it
> >possible to use them for phased mixers for SSB generation?
> >
> >73 jan-martin LA8AK
>
>
> Yes it is. A long time ago I built an image reject (IOW, SSB) mixer with
> an IF of 4 MHz and an RF frequency of 1.3 GHz. The LO was 652 MHz and
> the mixers used anti-parallel diodes as described in an old Ham Radio
> Mag article. The 2nd harmonic mixing did not interfere with the image
> reject operation at all. In those days, you couldn't get a prescaler
> that worked at 1.3 GHz for the PLL.
>
> Rick Karlquist N6RK
> rick@area.com
>
> .

>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 12:18:30 GMT
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: FM828 Mods for 6 meters
>
> I have an old A band FM828 which I want to use on 50 MHz.
> Anyone have sources for the circuit and mods to do this?
> In particular the mods to the PA board.
>
> Thanks
> Richard hosking
>
> .
>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 18:38:05 -0400
> From: ns.ve1jfa@rac.ca (Jeff Avery)
> Subject: Help: VFD driver chips
>
> I need some info on two vacuum fluorescent driver chips. I have searched
> the web and have put a message on sci.electronics.components but have had
> no replies. So I am turning to the ham radio community where I have found
> help in the past.
>
> The first driver chip is numbered 10938P-50 and also 10940-16. The second
> driver chip is numbered 10939P-50 and also 10939-11. I think the logo on
> the chips is Rockwell.
>
> The drivers are on a board that I would like to use in a project. It
> contains a 1 line x 20 character (5 x 7 dots) Vacuum Fluorescent Display,
> the driver chips, and circuits to create the required voltages.
>
> Can anyone supply info on these two driver chips?
>
> --
> Jeff
>
> To reply, remove "ns." from my email address.
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 04:09:25 GMT
> From: rcnixon@mindspring.com (Russell C. Nixon)
> Subject: Looking For a Home Built Big DC Power Supply.
>
> Jan-Martin,

>
> Give the article a look. the directions are really quite
> explicit and the secondaries are wound with copper sheet. If I were
> in the market for a power suply project, I would try it. Fortunatly,
> a Drake TR-7 and PS-7 (25 amps at 13.8 volts) came my way and if I
> need a LOT of DC, I can adapt the PS-7.
>
> Russ - KF4WXD
>
> LA8AK@online.no (J M Noeding) wrote:
>
> >On Sun, 13 Feb 2000 04:19:22 GMT, rcnixon@mindspring.com (Russell C.
> >Nixon) wrote:
> >
> >>
> >>Jan-Martin,
> >>
> >> Is that a switcher or a really big secondary on the
> >>transformer? Note that there was a two ot three-part article in QST
> >>lat year or so for a hefty switching supply. You even get to wind
> >>your oun transformers.
> >>
> >>Russ - KF4WXD
> >>
> >sorry, no I don't like to wind my own transformers - particularly -
> >since I never get the proper cores and flat wire
>
> .
>
> ------------------------------
>
> Date: 15 Feb 2000 01:05:48 GMT
> From: ax9909@aol.com (Ax9909)
> Subject: murata ceramic filters: where to buy?
>
> looking for a source of murata ceramic if filters. have not been having
any
> luck finding a vendor who can supply in small lots, 1,2 or 3 at a time. i
have
> a need for three or four different types [band widths]. these filters are
at
> 455khz and come in many different pass-band widths and numbers of internal
> elements. i am looking for 6, 9 and 15 element units. the band widths i
would
> be interested in are as follows: -6db -60db
> 4 kc..... to .....10 kc
> 6 kc..... to.....15 kc all filters must be 1500
to
> 2000 ohm
> 12 kc.....to.....22 kc impedence, input and

output.
> 15 kc.......to..........25 kc
>
> if anyone has things like these or can point me in the right direction to
find
> a vendor, your help will be greatly appreciated.....thanks to
all....."george"
>
>
>
> .
>
> ------------------------------
>
> Date: 14 Feb 2000 21:38:55 -0800
> From: rick@vax.area.com (Richard Karlquist)
> Subject: murata ceramic filters: where to buy?
>
> In article <20000214200548.26295.00003317@ng-cn1.aol.com>,
> Ax9909 <ax9909@aol.com> wrote:
> >looking for a source of murata ceramic if filters. have not been having
any
> >luck finding a vendor who can supply in small lots, 1,2 or 3 at a time.
i have
>
> I went through this before, and Murata in small qty is a forget it.
> Try Toko via DigiKey.
>
> Rick Karlquist N6RK
> .
>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 22:35:22 -0000
> From: "a f mason" <gw0tkx@ic24.net>
> Subject: need circuit for cat interface
>
> wanted circuit diagram for cat interface ft767gx
> can anybody help??
>
>
> .
>
> ------------------------------
>
> Date: 14 Feb 2000 21:06:24 GMT
> From: kf8od@aol.com (Kf8od)
> Subject: need manual for Eratron HFP 85012
>
> Need a manual for Earton HFP 85012. This is a water cooled rf generator.

Any
> help appreciated.
>
> 73, Mike
> KF8OD
> Long live QRO!
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 13:51:52 +1100
> From: "wb" <willyacht@yahoo.com>
> Subject: Non inductive resistors/sources
>
> I am looking for some non inductive resistors of about 100 to 150 watts in
> 12.5 , 200 and 450 ohm. Can anyone suggest some sources? Dale makes some
> resistors that are claimed to be non inductive, or close to it, would
these
> be suitable for a grid termination for a tetrode amp?
>
> will
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 04:25:27 GMT
> From: "Michael D. Harmon" <mharmon@tranquility.net>
> Subject: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?
>
> Ed,
>
> Check out the following site:
>
> http://www.ivex.com/
>
> They have a schematic capture (drafting) program called WinDraft and a PCB
> layout program called WinBoard which are free for download. The only
catch
> is that they are limited to 100 pins (each). You can buy additional pin
> capacity if you need it.
>
> They also have a pretty comprehensive symbol library and there are
> "contributed" libraries for weird proprietary chips, etc. The docs are
also
> available free for download in MS Word format.
>
> Hope This Helps,
> 73,

> Mike Harmon, WB0LDJ
>
> Ed Lyons wrote:
>
> > I am looking for a simple windows base program to do PC board layouts. I
> > have been searching through the web and found a few that are free like
> > Express PCB. Yes this one is free but the catch is that they will do
> > your boards at about $120 US for 2.
> > I can print this one out but they mask it so you cannot build your on.
> >
> > I am willing to pay for a program but not $400.00 + to do 1 single
> > board.
> >
> > Can you help me?
> >
> > Thanks in advanced
> >
> > --
> > Ed Lyons
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 01:02:50 -0500
> From: "Carl R. Stevenson" <wa6vse@fast.net>
> Subject: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?
>
> "Michael D. Harmon" <mharmon@tranquility.net> wrote in message
> news:38A8D57B.DF4C7011@tranquility.net...
> > Ed,
> >
> > Check out the following site:
> >
> > http://www.ivex.com/
> >
> > They have a schematic capture (drafting) program called WinDraft and a
PCB
> > layout program called WinBoard which are free for download. The only
> catch
> > is that they are limited to 100 pins (each). You can buy additional pin
> > capacity if you need it.
>
> Better yet ... check out Eagle Light at http://www.cadsoftusa.com/
>
> available for Win9x/NT/2k and also for Linux ... only limitations are:
>
>
>
>

> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 01:06:24 -0500
> From: "Carl R. Stevenson" <wa6vse@fast.net>
> Subject: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?
>
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> "Michael D. Harmon" <mharmon@tranquility.net> wrote in message
> news:38A8D57B.DF4C7011@tranquility.net...
> > Ed,
> >
> > Check out the following site:
> >
> > http://www.ivex.com/
> >
> > They have a schematic capture (drafting) program called WinDraft and a
PCB
> > layout program called WinBoard which are free for download. The only
> catch
> > is that they are limited to 100 pins (each). You can buy additional pin
> > capacity if you need it.
>
> Better yet, checkout Eagle (from CadSoft) Light at
> http://www.cadsoftusa.com/freeware.htm
>
> Freeware
> The EAGLE 3.5 Light Edition can be used for free!
> Limitations
> The following limitations apply to the EAGLE Light Edition in general:
> The useable board area is limited to 100 x 80 mm (4 x 3.2 inches).
> Only two signal layers can be used (Top and Bottom).
> The schematic editor can only create one sheet.
> Apart from these three limitiations the EAGLE Light Edition can do
> anything the Professional Edition can do. You can even load, view
> and print drawings that exceed these limits!
> The Freeware version of EAGLE Light adds these limitations:
> Support is only available via email or through our forum (no fax
> or phone support).
> Use is limited to non-profit applications or evaluation purposes.
> What does "non-profit" mean?
> The definition of non-profit is fairly simple and straightforward:
> If you earn money by using the Freeware version of EAGLE Light,
> you have to register it.
> This allows anybody who wishes to use EAGLE Light for their
> private hobby projects to do so. Also students can use this version
> for any educational projects. It is even ok to use this version in a

> commercial environment, as long as you just want to evaluate the
> program. As soon as you start using it for commercial projects, you
> will have to register it.
>
> I am NOT affiliated with CadSoft in any way beyond being a
> satisfied customer for their professional version ...
>
>
> - --
> Carl R. Stevenson - wa6vse
> <mailto:wa6vse@fast/net>
> <http://www.users.fast.net/~wa6vse>
> - --
> NCI-1052
> Executive Director, No Code International
> Fellow, The Radio Club of America
> Senior Member, IEEE
> Member, TAPR
> Member, ARRL
> - --
> Join No Code International! Hams for the 21st Century.
> Help assure the survival and prosperity of ham radio.
> <http://www.nocode.org>
>
>
> -----BEGIN PGP SIGNATURE-----
> Version: PGP for Personal Privacy 5.5.3
>
> iQA/AwUBOKjs2pe+N6+q84HiEQLIwwCePGSQVb8xCgzuS/Fl3uvm5UzFwo0AoISd
> Xtm8ZwLOsfIqgzhuPdPfNo0J
> =CHN3
> -----END PGP SIGNATURE-----
>
>
>
> .
>
> ------------------------------
>
> Date: Mon, 14 Feb 2000 15:59:54 -0600
> From: "David Knaack(spam blocked email)" <dknaack@n0spann.rdtech.com>
> Subject: Soldering/Homebrewing using surface MOUNT components ..ie chip
capacitors..
>
> John Miles <jmiles@pop.removethistomailme.net> wrote in message
> news:38A75DF0.6165@pop.removethistomailme.net...
> > earlve3ab@igs.net wrote:
> > >
> > > I bought some chip capacitors in the bargain bin at the electronics
> > > store..Im wondering how an amateur homebrewer could use them.

> >
> > Use a clean, hot iron with a small tip when hand-soldering these
> > puppies.
>
> I've found that applying flux to the surfaces makes mounting
> SMT components much easier. The flux in the solder just doesn't
> help much.
>
> DK
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 04:07:41 GMT
> From: Constantine <wa1wla@juno.com>
> Subject: Soldering/Homebrewing using surface MOUNT components ..ie chip
capacitors..
>
> In article <38A75DF0.6165@pop.removethistomailme.net>,
> jmiles@pop.removethistomailme.net wrote:
> > earlve3ab@igs.net wrote:
> > >
> > > I bought some chip capacitors in the bargain bin at the electronics
> > > store..Im wondering how an amateur homebrewer could use them..they
> > > are good RF Values ie 150 pf 330 pf and rated at 50 volts BUT they
> > > are very small of course! Any recommendations? I might think of
> trying
> > > my 25 watt soldering iron with a delicate approach. Im thinking of
> > > using these little guys in a rcvr front end filter project with
> small
> > > torroids to make a small ..compact unit...73 Earl VE3AB
> >
> > If you use PC boards, there's nothing special you need to do -- just
> > solder the cap down one end at a time, perhaps holding it in place
> with
> > a toothpick. Otherwise, if you're not mounting them flat on a board,
> > the thing to remember is that their ability to withstand force applied
> > to their terminals is absolutely ZERO. Once you solder a chip cap
> into
> > a circuit using dead-bug construction, you've got to be careful not to
> > bend the leads attached to it at all.
> >
> > Use a clean, hot iron with a small tip when hand-soldering these
> > puppies.
>
> Instead of holding it down with a toothpick, stick it on a piece of
> transparent tape, this way you can't loose it.
> Don't wory about burning the tape with the iron, the chip cap will stay

> on the tape even if you burn close to it.
> 73 WA1WLA
>
>
> >
> > -- jm
> >
> > ----------
> > http://www.qsl.net/ke5fx
> > Note: My E-mail address has been altered to avoid spam
> > ----------
> >
>
> -- e
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.
> .
>
> ----------
>
> Date: Mon, 14 Feb 2000 21:38:18 -0800
> From: "Jim Pennell" <no-sapm@spam.com>
> Subject: Soldering/Homebrewing using surface MOUNT components ..ie chip
capacitors..
>
> I've had good luck using perf board... Get the 1/10 inch centers with
> copper donuts around each hole.
>
> I find them at Radio Shack for a reasonable price.
>
> If you position the surface mount resistor, or capacitor carefully, you
> can solder it to seperate donut pads.
>
> This is very convenient in that I can then add another surface mount
part
> from that same pad to another one to build up the circuit.
>
> Or, insert a through hole IC from the non-copper side, and use small
gauge
> bus wire to connect the pins of the IC to the surface mount part next to
it.
>
> The net effect is, an easy semi "PCBOARD" prototype with the bus wire
> serving as trace connections between the surface mount parts.
>
> All in all, I find it just about as easy as a through hole prototype,
and
> a heck of a lot smaller finished product !!!

>
> True, I do have to spend some time working out an approximate parts
> placement, before assembly, but it is fast and allows using the small
> surface mount parts even in a one off breadboard.
>
>
> Jim Pennell
>
> jpennell
>
> at ix dot netcom dot com
>
>
>
>
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 05:07:50 GMT
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> >Available now borads and controllers for this project
> >
> >see http://www.iinet.net.au/~richardh/vfostab
> >
> >Count to 30 MHz 10Hz resolution
> >Interfaces to 16 by 2 LCD displays
> >16 user settable offsets +/- to 10 Hz
> >PLL VFO stabilizer automatic lock invisible to the user.
> >
> >Board PTH/masked/overlay
> >Programmed controller Atmel AT90S1200
> >
> >Board+micro AUS$35.00 P+P $3.00
> >
> >E mail me at richardh@iinet.net.au
>
> .
>
> ------------------------------
>
> End of Ham-Homebrew Digest V2000 #46
> ******************************
>

1240. Re: Will this blow-up?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38A987F9.2E8032AB@sympatico.ca>
Source record: 63205

JW wrote:

> To get a little more complicated, however, I was wondering if one could
> "modulate" an LM337 in its "adjustable" mode by lifting the control leg
> from ground and inserting a 1V RMS sine wave. I have done this to make
> an adjustable 0-30V negative supply simply by inserting a positive
> reference in the control loop. (As you know, the lower limit of the
> LM337 is -1.25 unless you insert +1.25).
>
> How angry is the LM337 goint to be if it is modulated in this fashion?
> I was thinking of only a 1kHz sine wave.

This kind of thing works fine and is the principle behind
popular designs for Gunn diode modulators.

Why not try it and see? Personally, I'd rather see "I tried
it and this is what happened..." than "Will this work?"
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

1241. URL For Ham-Homebrew Digest???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38A98AE1.36AA85F9@ix.netcom.com>
Source record: 63206

Regarding Ham-Homebrew Digest V2000 #46
Is this digest from
http://ftp.ucsd.edu/
???
Would like to link to same.

FYI: Lots of HomeBrew Links at URL:
http://www.ac6v.com/pagehb.html

--
73 From Rod In San Diego

AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 565,000 visits on the counter
http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

1242. Re: murata ceramic filters: where to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Ron <w8ron@stratos.net>
Message-ID: <38A98E17.871CAAC7@stratos.net>
Source record: 63207

Sometimes you can get samples if you pretend to be experimenting.
Try Hosfelt Electronics....they have some at 455 Kc 6KC at about $.30 each
---
Ron

Ax9909 wrote:

> looking for a source of murata ceramic if filters. have not been having any
> luck finding a vendor who can supply in small lots, 1,2 or 3 at a time. i have
> a need for three or four different types [band widths]. these filters are at
> 455khz and come in many different pass-band widths and numbers of internal
> elements. i am looking for 6, 9 and 15 element units. the band widths i would
> be interested in are as follows: -6db -60db
> 4 kc..... to .....10 kc
> 6 kc..... to.....15 kc all filters must be 1500 to
> 2000 ohm
> 12 kc.....to.....22 kc impedence, input and output.
> 15 kc.....to.....25 kc
>
> if anyone has things like these or can point me in the right direction to find
> a vendor, your help will be greatly appreciated.....thanks to all....."george"
>
>
>

1243. Re: murata ceramic filters: where to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Ron <w8ron@stratos.net>
Message-ID: <38A98E52.7B33E3A6@stratos.net>
Source record: 63208

Sometimes you can get samples.
Try Hosfelt Electronics....they have some at 455 Kc 6KC at about $.30 each
---
Ron

Ax9909 wrote:

> looking for a source of murata ceramic if filters. have not been having any
> luck finding a vendor who can supply in small lots, 1,2 or 3 at a time. i have
> a need for three or four different types [band widths]. these filters are at
> 455khz and come in many different pass-band widths and numbers of internal
> elements. i am looking for 6, 9 and 15 element units. the band widths i would
> be interested in are as follows: -6db -60db
> 4 kc..... to .....10 kc
> 6 kc..... to.....15 kc all filters must be 1500 to
> 2000 ohm
> 12 kc.....to.....22 kc impedence, input and output.
> 15 kc.....to.....25 kc
>
> if anyone has things like these or can point me in the right direction to find
> a vendor, your help will be greatly appreciated.....thanks to all....."george"
>
>
>

1244. Re: 7-seg LCD source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Ron <w8ron@stratos.net>
Message-ID: <38A98F85.4110D176@stratos.net>
Source record: 63209

Hi Michael.
Having worked in the LCD industry, I have some limited supply of various types .
Contact me for more info.

Ron

Michael Tracy wrote:

> Does anyone know of a source for 7-segment LCDs? Multiple digits are fine, I
> just don't want to be bothered with the extra baggage dot matrix displays
> involve. I would also prefer to not rip apart an existing device (such as a
> clock) because I want to have a project others can duplicate.
>
> I will fall back to LEDs if need be, but would prefer a source for LCDs. So
> far, I've looked through every catalog and web page I could find with no luck.
> All the 7-seg LCDs come wrapped up as panel meters, up counters, etc.
>
> I could use an up/dn counter too (that's what I really want anyway), but
> nobody seems to make any of those either.
>
> Thanks and 73, Michael Tracy, KC1SX
> mtracy@arrl.org

1245. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38A9ACE5.6EB3@ixpres.com>
Source record: 63210

Don't overlook Dan's Small Parts. Good prices, wide assortment.

73,
Don, W6JL

1246. Important message from France CFRR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: RA-News <he@wanadoo.fr>
Message-ID: <88cb41$5lv$6@wanadoo.fr>
Source record: 63211

This is an important message

from : CFFR Confederation of French Radioamateurs and Radiolisteners

to : All radioamateurs

to get the original file of this message, it is nessecary to connect :

http://www.cfrr.org/cfrr_actuels/cominfo0002.pdf

and for an "smell of it" ....: (perhaps you like to have a look to our page ? it's easy at : http://www.cfrr.org for any information of our confederation / or connect http://www.sldx.net for an taste of the life of an small radioamateur club located in the triangle (and the heart of Europe) of LX,F and DL

COMMUNIQUE SPECIAL D'INFORMATION de la C.F.R.R.

du 5 f�vrier 2000 N° 2000-02

Jugement du Conseil d'Etat. Un fait sans pr�c�dent dans les annales du radioamateurisme fran�ais.
S�ance du 5 janvier 2000 - Lecture du 26 janvier 2000 - Notification du 3 f�vrier 2000
Les requ�rants ont re�u le 4 f�vrier 2000 la d�cision du Conseil d'Etat concernant la r�glementation amateur.

Extrait des conclusions du Conseil d'Etat :

« ..qu'ainsi les dispositions des articles 2, 3, 4 et 13 de la d�cision homologu�e par l'arr�t« attaqu« ont »t« prise par une autorit« incomp»tente ; que ces dispositions »tant indivisibles des autres articles de la d»cision 97-453 du 17 d»cembre 1997 de l'autorit« de r»gulation des t»l»communications, les requ»rants sont fond»s « demander l'annulation de l'arr»t« du 14 mai 1998 du secr»taire d'Etat « l'industrie en tant qu'il homologue cette d»cision. »

DECIDE

Article 1er: : L'arr»t« du 14 mai 1998 du secr»taire d'Etat « l'industrie est annul« en tant qu'il homologue la d»cision 97-453 du 17 d»cembre 1997 de l'autorit« de r»gulation des t»l»communications fixant les conditions d'utilisation des installations de radioamateurs et de d»livrance des certificats et des indicatifs

radioamateurs.

L'article 2 : (�num�re les noms et qualit�s des requ�rants.)

Cons�quemment,
"La R�publique mande et ordonne au ministre de l'�conomie des finances et de l'industrie en ce qui le
concerne et � tous huissiers � ce requis en ce qui concerne les voies de droit commun contre les parties
priv�es de pourvoir � l'ex�cution de la pr�sente d�cision."

La CFRR ajoute que pour toute information relative aux cons�quences de droit de la d�cision d'annulation, les
radioamateurs peuvent s'enqu�rir aupr�s de l'administration de tutelle ou de la seule des trois f�d�rations de la
concertation nationale ayant donn� quitus � l'ART.

Ce communiqu� est disponible sur le r�seau packet et Internet (http://www.cfrr.org) et libre de diffusion sous
r�serve qu'elle soit int�grale.

Fin du communiqu� n° 2000 - 02

Le Pr�sident
Bernard SINEUX / F5LPQ

Conf�d�ration Fran�aise des Radioamateurs et Radio�couteurs

Association � but non lucratif, r�gie par la loi 1901

C.F.R.R. - Conf�d�ration Fran�aise des Radioamateurs et Radio�couteurs.
Si�ge social : 26, rue Dagorno
75012 PARIS FRANCE
E-mail : cfrr@cfrr.org - Serveur : http://www.cfrr.org

1247. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <38A9BDEB.33088534@juno.com>
Source record: 63212

Does he have a web page? Thanks, ARt. KF7GD

Don W6JL wrote:
>
> Don't overlook Dan's Small Parts. Good prices, wide assortment.
>
> 73,
> Don, W6JL

1248. Amplifier - 811A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Mal R Ellis <malellis@ihug.co.nz>
Message-ID: <88cev4fma1@news.ihug.co.nz>
Source record: 63213

Help required...
If anyone out there has a circuit diagram of an Amp using 2 x 811A's that works I would appreciate a copy .

73's ... Mal ZL3DF

1249. Re: PARTS source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38A9D600.3774DBB9@ix.netcom.com>
Source record: 63214

A Jury wrote:

> Does he have a web page? Thanks, ARt. KF7GD
>
> Don W6JL wrote:
> >
> > Don't overlook Dan's Small Parts. Good prices, wide assortment.
> >
> > 73,
> > Don, W6JL

Art -- Dan's small parts is at URL:
http://www.fix.net/dans.html

Dozens and dozens more at URL:
http://www.ac6v.com/pageaaa.html

--
73 From Rod In San Diego

AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 565,000 visits on the counter
http://www.ac6v.com/ -- General Ham Radio
http://www.ac6v.com/pagedx.html -- DX Reference Pages

1250. Polystyrene Sources?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Xjshillw6ivw@earthlink.net
Message-ID: <38a9d61d.23976609@news.earthlink.net>
Source record: 63215

Does anyone know where clear polystyrene rods, tubes, or sheets can be
purchased? McMaster Carr used to carry it, for a price, but currently
only lists white high-impact polystyrene. I want low-loss material,
but they list their product as a "poor electrical insulator"
Thanks, Jim
Delete the X before using my e-mail address.
The X was added to stop spam.

1251. Re: 4CX-800

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <88d9tb$f25@nnrp1.farm.idt.net>
Source record: 63216

<w5rg@swbell.net> wrote in message news:38A85F16.BD6D5589@swbell.net...
> Does anyone have a good diagram for useing this
> tube in a AMP?? I have been looking and can't
> find any..I know Alpha,QRO and a few others are
> making AMPS with this tube...Thanks Bob

You could try finding a dead Dentron MLA-2500 amplifier and try using the URL below which outline a conversion job on the above amplifier to use a 4CX400 which is similar to the 4CX800.

http://www.svetlana.com/docs/TechBulletins/technoteNo14.html

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse Code is used exclusively by Electronics Based life forms to communicate amongst themselves using advanced Organic Digital Signal Processors, running state of the art Artificial Intelligence Software, to perform the highly complex transmit encryption, receive decryption and error correction functions."

1252. Re: Amplifier - 811A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <88d9il$ev9@nnrp1.farm.idt.net>
Source record: 63217

"Mal R Ellis" <malellis@ihug.co.nz> wrote in message
news:88cev4fma1@news.ihug.co.nz...
>
> Help required...
> If anyone out there has a circuit diagram of an Amp using 2 x 811A's that
> works I would appreciate a copy .

How about using a 572B? You can get the plans on how to build an amplifier
using this tube from:

http://www.svetlana.com/docs/TechBulletins/technoteNO.34.html

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

1253. Re: Soldering/Homebrewing using surface MOUNT components ..ie chip capacitors..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Constantine <wa1wla@juno.com>
Message-ID: <88ajeblmn1@nnrp1.deja.com>
Source record: 63335

In article <38A75DF0.6165@pop.removethistomailme.net>,
jmiles@pop.removethistomailme.net wrote:
> earlve3ab@igs.net wrote:
> >
> > I bought some chip capacitors in the bargain bin at the electronics
> > store..Im wondering how an amateur homebrewer could use them..they
> > are good RF Values ie 150 pf 330 pf and rated at 50 volts BUT they
> > are very small of course! Any recommendations? I might think of
trying
> > my 25 watt soldering iron with a delicate approach. Im thinking of
> > using these little guys in a rcvr front end filter project with
small
> > torroids to make a small ..compact unit...73 Earl VE3AB
>
> If you use PC boards, there's nothing special you need to do -- just
> solder the cap down one end at a time, perhaps holding it in place
with
> a toothpick. Otherwise, if you're not mounting them flat on a board,
> the thing to remember is that their ability to withstand force applied
> to their terminals is absolutely ZERO. Once you solder a chip cap
into
> a circuit using dead-bug construction, you've got to be careful not to
> bend the leads attached to it at all.
>
> Use a clean, hot iron with a small tip when hand-soldering these
> puppies.

Instead of holding it down with a toothpick, stick it on a piece of
transparent tape, this way you can't loose it.
Don't wory about burning the tape with the iron, the chip cap will stay
on the tape even if you burn close to it.
73 WA1WLA

>
> -- jm
>
> --
> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> --
>

-- e

Sent via Deja.com http://www.deja.com/
Before you buy.

1254. murata ceramic filters: where to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: ax9909@aol.com
Message-ID: <20000214200548.26295.00003317@ng-cn1.aol.com>
Source record: 63336

looking for a source of murata ceramic if filters. have not been having any luck finding a vendor who can supply in small lots, 1,2 or 3 at a time. i have a need for three or four different types [band widths]. these filters are at 455khz and come in many different pass-band widths and numbers of internal elements. i am looking for 6, 9 and 15 element units. the band widths i would be interested in are as follows: -6db -60db
4 kc..... to .....10 kc
6 kc..... to.....15 kc all filters must be 1500 to
2000 ohm
12 kc.....to.....22 kc impedence, input and output.
15 kc.....to.....25 kc

if anyone has things like these or can point me in the right direction to find a vendor, your help will be greatly appreciated.....thanks to all....."george"

1255. Non inductive resistors/sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: wb <willyacht@yahoo.com>
Message-ID: <vb3q4.26020$3b6.114245@ozemail.com.au>
Source record: 63337

I am looking for some non inductive resistors of about 100 to 150 watts in 12.5 , 200 and 450 ohm. Can anyone suggest some sources? Dale makes some resistors that are claimed to be non inductive, or close to it, would these be suitable for a grid termination for a tetrode amp?

will

1256. Re: Looking For a Home Built Big DC Power Supply.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38a8d0bc.2980813@news.mindspring.com>
Source record: 63338

Jan-Martin,

Give the article a look. the directions are really quite
explicit and the secondaries are wound with copper sheet. If I were
in the market for a power suply project, I would try it. Fortunatly,
a Drake TR-7 and PS-7 (25 amps at 13.8 volts) came my way and if I
need a LOT of DC, I can adapt the PS-7.

Russ - KF4WXD

LA8AK@online.no (J M Noeding) wrote:

>On Sun, 13 Feb 2000 04:19:22 GMT, rcnixon@mindspring.com (Russell C.
>Nixon) wrote:
>
>>
>>Jan-Martin,
>>
>> Is that a switcher or a really big secondary on the
>>transformer? Note that there was a two ot three-part article in QST
>>lat year or so for a hefty switching supply. You even get to wind
>>your oun transformers.
>>
>>Russ - KF4WXD
>>
>sorry, no I don't like to wind my own transformers - particularly -
>since I never get the proper cores and flat wire

1257. Re: VFO Stabilizer/Frequency Counter Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38a8defc.4981187@news.m.iinet.net.au>
Source record: 63339

>Available now borads and controllers for this project
>
>see http://www.iinet.net.au/~richardh/vfostab
>
>Count to 30 MHz 10Hz resolution
>Interfaces to 16 by 2 LCD displays
>16 user settable offsets +/- to 10 Hz
>PLL VFO stabilizer automatic lock invisible to the user.
>
>Board PTH/masked/overlay
>Programmed controller Atmel AT90S1200
>
>Board+micro AUS$35.00 P+P $3.00
>
>E mail me at richardh@iinet.net.au

1258. Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Chris Kelliing <kellingc@erols.com>
Message-ID: <88aotl$da2$1@bob.news.rcn.net>
Source record: 63340

I have a car battery that no longer has a battery, and thought it would do good as a emergency power supply. What I would like to do is use my Astron power supply to keep the battery charged. Does anyone have some ideas or schematics for a protection circuit?

Thanks,
Chris Kelling
N1WKO

1259. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <sahr7ace2pd91@corp.supernews.com>
Source record: 63341

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

"Michael D. Harmon" <mharmon@tranquility.net> wrote in message
news:38A8D57B.DF4C7011@tranquility.net...
> Ed,
>
> Check out the following site:
>
> http://www.ivex.com/
>
> They have a schematic capture (drafting) program called WinDraft and a PCB
> layout program called WinBoard which are free for download. The only
catch
> is that they are limited to 100 pins (each). You can buy additional pin
> capacity if you need it.

Better yet, checkout Eagle (from CadSoft) Light at
http://www.cadsoftusa.com/freeware.htm

Freeware
The EAGLE 3.5 Light Edition can be used for free!
Limitations
The following limitations apply to the EAGLE Light Edition in general:
The useable board area is limited to 100 x 80 mm (4 x 3.2 inches).
Only two signal layers can be used (Top and Bottom).
The schematic editor can only create one sheet.
Apart from these three limitiations the EAGLE Light Edition can do
anything the Professional Edition can do. You can even load, view
and print drawings that exceed these limits!
The Freeware version of EAGLE Light adds these limitations:
Support is only available via email or through our forum (no fax
or phone support).
Use is limited to non-profit applications or evaluation purposes.
What does "non-profit" mean?
The definition of non-profit is fairly simple and straightforward:
If you earn money by using the Freeware version of EAGLE Light,
you have to register it.
This allows anybody who wishes to use EAGLE Light for their
private hobby projects to do so. Also students can use this version
for any educational projects. It is even ok to use this version in a
commercial environment, as long as you just want to evaluate the
program. As soon as you start using it for commercial projects, you
will have to register it.

I am NOT affiliated with CadSoft in any way beyond being a
satisfied customer for their professional version ...

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- --
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- --
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

iQA/AwUBOKjs2pe+N6+q84HiEQLIwwCePGSQVb8xCgzuS/Fl3uvm5UzFwo0AoISd
Xtm8ZwLOsfIqgzhuPdPfNo0J
=CHN3
-----END PGP SIGNATURE-----

1260. Re: An Idea for Direct conversion FM data....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: "Carl R. Stevenson" <wa6vse@fast.net>
Message-ID: <sahrd6262pd54@corp.supernews.com>
Source record: 63342

-----BEGIN PGP SIGNED MESSAGE-----
Hash: SHA1

"Richard Karlquist" <rick@vax.area.com> wrote in message
news:88aou0$cu0$1@vax.area.com...
> In article <38A8669A.AF4330AA@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com>
wrote:
> >I'm working on building a truly tiny FM telemetry transceiver.
> >I want it to inter operate with standard APRS equipment, like the
> >Kenwood H7A.
> >I like the simplicity of a direct conversion receiver a whole lot.
> >If I set the LO = to the center frequency, then as the FM deviation
> >Any comments?
>
> You ought to look at direct conversion FSK pager receiver designs,
> like the ones they use in watch pagers. Two mixers in quadrature, LO
> at the midpoint of mark and space frequencies, and a D-flip flop
> is all you need.
>
> Rick Karlquist N6RK

However, the pagers use a rather large modulation index to create a
null at the carrier frequency, which maps to DC in the conversion to
baseband ... that way they can AC couple and get around the DC
offset problems caused by carrier self-mixing to DC which can be
a major problem.

- --
Carl R. Stevenson - wa6vse
<mailto:wa6vse@fast/net>
<http://www.users.fast.net/~wa6vse>
- --
NCI-1052
Executive Director, No Code International
Fellow, The Radio Club of America
Senior Member, IEEE
Member, TAPR
Member, ARRL
- --
Join No Code International! Hams for the 21st Century.
Help assure the survival and prosperity of ham radio.
<http://www.nocode.org>

-----BEGIN PGP SIGNATURE-----
Version: PGP for Personal Privacy 5.5.3

```
iQA/AwUBOKjtl5e+N6+q84HiEQJpPgCfUNsNVYlszqDjWB8WYXWyuk9kV7kAoMAx
VJ1r35VwzTL1VrdsH/gJbT03
=KZJx
-----END PGP SIGNATURE-----
```

1261. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <88b2mi$tfo@newton.cc.rl.ac.uk>
Source record: 63343

Chris Kelliing <kellingc@erols.com> wrote in message
news:88aotl$da2$1@bob.news.rcn.net...
> I have a car battery that no longer has a battery

What ?

You can buy special battery chargers. The important thing is to stop
charging when fully charged so you need a voltage limited supply. You also
need to limit the charging current to avoid self destruction. In addition,
you need to prevent the battery reverse charging the supply when the power
is off. A strategically placed diode will do this but will drop up to 0.7V
or so. There was a design in the ARRL handbook. You could also use a relay
driven from the supplies supply.

Can your Astron provide around 15-16V ? Does it have current foldback ?

1262. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-15 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38A93C8D.7FAA6D3@cmcorp.com>
Source record: 63344

Chris Kelliing wrote:

> I have a car battery that no longer has a battery, and thought it would do
> good as a emergency power supply. What I would like to do is use my Astron
> power supply to keep the battery charged. Does anyone have some ideas or
> schematics for a protection circuit?
>
> Thanks,
> Chris Kelling
> N1WKO

Your Astron can not overcharge the battery.
(It does not have high enough voltage output.)
So the battery will never be full charged.
DO add a fuse/Circuit breaker AT THE BATTERY terminals.
(So you don't fuse the screwdriver/wrench etc...)

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1263. a TNC made with PIC's???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: tj@johnston.net
Message-ID: <38aa0dc6.15578277@news.mindspring.com>
Source record: 63218
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,alt.hamradio.packet

Is anyone or any group currently working on a fully functional TNC made with PIC's? It seems these are very popular chips now.. and quite versatile. I would love to build my own TNC... in my own case... using these new chips. I am looking to do this for APRS and would love to build one with multiple rs-232 inputs for GPS, RDF and such...

Unfortunately I am not up to speed on PIC's ... yet... and would hate to re-invent the wheel.. if someone else is doing this already.

Tj Johnston, N4UYQ

1264. Re: VFD driver chips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: John DeGood <nu3e@arrl.net>
Message-ID: <Kuqq4.10080$pN1.161586@news1.rdc1.nj.home.com>
Source record: 63219

Wow, this brings back some really old memories! These chips were indeed manufactured by Rockwell. They integrated a display controller and high voltage display drivers, and were manufactured using a unique high voltage PMOS process proprietary to Rockwell. Both parallel and serial interfaces were included. They were very neat chips in their day, as they typically replaced a microprocessor and a handful of high voltage display drivers.

The early production years of the Hewlett-Packard 5890A gas chromatograph used these chips to drive the front panel display. I designed the display board in that instrument in the early 80s, and although I am a terrible packrat, I just searched the old files in my basement and I don't appear to have retained copies of those Rockwell data sheets.

In order to use the chips you'll need their command set which is specified in the Rockwell data sheets. There is a special initialization sequence required, and various commands to take advantage of different display features, e.g. brightness, blinking, cursors, special characters, etc. Regrettably, I don't have a copy of the code I wrote to do that, either!

If you obtain a copy of the data sheets from Rockwell or somewhere else and have questions, feel free to contact me and I'll try to help. Good luck!

73,

John NU3E

"Jeff Avery" <ns.ve1jfa@rac.ca> wrote in message
news:ns.ve1jfa-1402001838050001@ts2-d24.mby.auracom.com...
> I need some info on two vacuum fluorescent driver chips. I have searched
> the web and have put a message on sci.electronics.components but have had
> no replies. So I am turning to the ham radio community where I have found
> help in the past.
>
> The first driver chip is numbered 10938P-50 and also 10940-16. The second
> driver chip is numbered 10939P-50 and also 10939-11. I think the logo on
> the chips is Rockwell.
>
> The drivers are on a board that I would like to use in a project. It
> contains a 1 line x 20 character (5 x 7 dots) Vacuum Fluorescent Display,
> the driver chips, and circuits to create the required voltages.
>
> Can anyone supply info on these two driver chips?
>
> --
> Jeff
>

> To reply, remove "ns." from my email address.

1265. Re: Roller Inductor Lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000216065516.05417.00001433@ng-cf1.aol.com>
Source record: 63220

To the person who wanted to know the consensus of this discussion:
(I'm sorry I lost the thread due to a computer malfunction...)
Many and different substances were suggested for use as a lubricant for roller inductors.
They were: (I hope I have remembered them all)

WD-40
Tuner cleaner/lube spray
conductive grease
silicone grease
teflon spray
ear wax !

If I've left anything out, please feel free to fill in.

I was trying to be funny when I said "Aint tellin'", but the truth is, I haven't tried anything yet to lube the roller inductor. I'm leaning toward the tuner cleaner/lube spray. I'll post how that works after I get the inductor motor drive working.
So, there are your choices so far!

73 de John N3DRA

1266. Kurzwellensender mit LM317 !!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: "Herbert Dingfelder (EED)" <Herbert.Dingfelder@eed.ericsson.se>
Message-ID: <38AA9CAF.3A6220F9@eed.ericsson.se>
Source record: 63221

Must mal anschauen ist cool.

http://hem.passagen.se/sm0vpo/tx/317-tx.htm

73 de Herbert

-- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- -- --
--
Herbert Dingfelder voice: +49 911 5217 448
Ericsson Eurolab Deutschland GmbH fax: +49 911 5217 952
Nordostpark 12 email:
Herbert.Dingfelder@eed.ericsson.se
Nuernberg, Germany

1267. Re: VFO Stabilizer/Frequency Counter Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38aab103.1516606@news.m.iinet.net.au>
Source record: 63222

On Tue, 15 Feb 2000 11:31:06 -0500, blackm00@cam.org (Michael Black)
wrote:

>In article <38A965D8.28CC283C@lafn.org>, af389@lafn.ORG (David Shalita) wrote:
>
>> Hi Richard,
>>
>> I tried and failed to look at this web site.
>>
>> 73, W6MIK
>>
>But this works: http://www.iinet.net.au/~richardh/vfostab.htm
>
> Michael VE2BVW
>
>> ============
>> From: richardh@iinet.net.au (Richard Hosking)
>> Subject: VFO Stabilizer/Frequency Counter Boards
>>
>> >Available now borads and controllers for this project
>> >
>> >see http://www.iinet.net.au/~richardh/vfostab
>> >
>> >Count to 30 MHz 10Hz resolution
>> >Interfaces to 16 by 2 LCD displays
>> >16 user settable offsets +/- to 10 Hz
>> >PLL VFO stabilizer automatic lock invisible to the user.
>> >
>> >Board PTH/masked/overlay
>> >Programmed controller Atmel AT90S1200
>> >
>> >Board+micro AUS$35.00 P+P $3.00
>> >
>> >E mail me at richardh@iinet.net.au
Thanks Michael
I just forgot the .htm

Richard

1268. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Derek Toeppen <derekt@rosalie.col.hp.com>
Message-ID: <88ej7i$q4h$1@nonews.col.hp.com>
Source record: 63223

Steve Carlisle <quatsein@island.net> wrote:
: Turbocad seems very close to going belly up. Try a Autocad

Belly up or not the program I have will still works.

: clone at www.cadopia.com

: Steve Carlisle

: On 10 Feb 2000 20:19:26 GMT, Derek Toeppen <derekt@rosalie.col.hp.com>
: wrote:

:>David Shalita <af389@lafn.org> wrote:
:>
:> I have been using TurboCad. www.turbocad.com. They have
:>2D and 3D packages at various prices. They even have a
:>downloadable version. I have not used the downloadable one
:>so I can't tell you how they limit it. My experience is limited
:>to the 2D standard version.
:>
:>: Hi,
:>
:>: Can you folks identify a low cost CAD software I can
:>: use to make general mechanical drawings, QRP cabinet layouts,
:>: ALTOID Tin layouts, lawn layouts, etc?
:>
:>: Shareware would be the best but do not limit recommendations.
:>
:>: Thanks and 73, W6MIK
:>: --
:>: David Shalita (Dave)
:>: af389@lafn.org
:>: Van Nuys, CA

1269. Re: Ham-Homebrew Digest V2000 #47

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: occ6@siscom.NET
Message-ID: <001a01bf78a4$be70dae0$9909fbd1@default>
Source record: 63224

----- Original Message -----
From: Ham-Homebrew Mailing List and Newsgroup <Ham-Homebrew@ucsd.edu>
To: <Ham-Homebrew@ucsd.edu>
Sent: Wednesday, February 16, 2000 7:30 AM
Subject: Ham-Homebrew Digest V2000 #47

>
> Ham-Homebrew Digest Wed, 16 Feb 2000 Volume 2000 : Issue 47
>
> Today's Topics:
> (none)
> 10GHz stuff for sale on eBay
> 4CX-800
> 4cx-800a tubes
> 7-seg LCD source?
> Amplifier - 811A (2 msgs)
> An Idea for Direct conversion FM data....
> a TNC made with PIC's???
> Car batteries; and the charging of
> Important message from France CFRR
> Looking For a Home Built Big DC Power Supply.
> murata ceramic filters: where to buy? (2 msgs)
> PARTS source? (3 msgs)
> Polystyrene Sources?
> Roller Inductor Lubrication
> subscribe
> URL For Ham-Homebrew Digest???
> VFD driver chips
> VFO Stabilizer/Frequency Counter Boards (3 msgs)
> Will this blow-up? (2 msgs)
>
> Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
> Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
> Problems you can't solve otherwise to brian@ucsd.edu.
>
> Archives of past issues of the Ham-Homebrew Digest are available
> (by FTP only) from ftp.UCSD.Edu in directory "mailarchives/ham-homebrew".
>
> We trust that readers are intelligent enough to realize that all text
> herein consists of personal comments and does not represent the official
> policies or positions of any party. Your mileage may vary. So there.
> Loop-Detect: Ham-Homebrew:2000/47
> --
>

> Date: 15 Feb 00 16:46:03 GMT
> From: z002138b@bc.SEflin.ORG (Rodney Herman)
> Subject: (none)
>
> unsubscribe ham-hombrew
>
>
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> ---
>
> Date: Tue, 15 Feb 2000 07:53:44 +0000
> From: "Anon O'Moose" <Sean@home.org>
> Subject: 10GHz stuff for sale on eBay
>
> I hope this won't really be looked at as SPAM. I just want to let you
> microwavers out there know about the box of misc. microwave parts and
> units I have up for sale on eBay.
>
> I have 2 working 10GHz units and many parts for sale in a sort of
> parts box.
>
> If you are interested, stop by. I want to move these things out of
> the shack as there seems to be little interest in uWaves here in
> Central Ohio.
>
> Thanks,

> KB8JNE
>
> http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=259987203
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 23:43:14 -0500
> From: "Leland C. Scott" <no-spam@junk-mail.net>
> Subject: 4CX-800
>
> <w5rg@swbell.net> wrote in message news:38A85F16.BD6D5589@swbell.net...
> > Does anyone have a good diagram for useing this
> > tube in a AMP?? I have been looking and can't
> > find any..I know Alpha,QRO and a few others are
> > making AMPS with this tube...Thanks Bob
>
> You could try finding a dead Dentron MLA-2500 amplifier and try using the
> URL below which outline a conversion job on the above amplifier to use a
> 4CX400 which is similar to the 4CX800.
>
> http://www.svetlana.com/docs/TechBulletins/technoteNo14.html
>
> --
> 73's,
>
> Leland C. Scott
> KC8LDO
>
> ARRL member
> NCI member
>
> "You ask what Morse Code is good for? I'll tell you. Morse
> Code is used exclusively by Electronics Based life forms to
> communicate amongst themselves using advanced Organic
> Digital Signal Processors, running state of the art Artificial
> Intelligence Software, to perform the highly complex
> transmit encryption, receive decryption and error correction
> functions."
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 07:05:21 -0600 (CST)
> From: w4th@webtv.net (Tom Hix W4TH)
> Subject: 4cx-800a tubes

>
> I have for sale 4cx-800a Svetlana tubes. These are new tubes. Price is
> $110.00 each plus shipping, and $100.00 each plus shipping when buying a
> pair. I will guarantee these tubes, and I will sell larger numbers for
> lower prices. Be sure to mention the price I have quoted here as this is
> the first time I have offered these tubes at this low price.
> 73
> Tom Hix
> W4TH
>
> ==========
> Be sure to visit my web sites.
>
> Amateur radio amp tubes.
> http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html
>
> Ham Radio Homepage.
> http://www.geocities.com/Heartland/Woods/6222/
>
>
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 12:40:21 -0500
> From: Ron <w8ron@stratos.net>
> Subject: 7-seg LCD source?
>
> Hi Michael.
> Having worked in the LCD industry, I have some limited supply of various
types .
> Contact me for more info.
> ---
> Ron
>
>
> Michael Tracy wrote:
>
> > Does anyone know of a source for 7-segment LCDs? Multiple digits are
fine, I
> > just don't want to be bothered with the extra baggage dot matrix
displays
> > involve. I would also prefer to not rip apart an existing device
(such as a
> > clock) because I want to have a project others can duplicate.
> >
> > I will fall back to LEDs if need be, but would prefer a source for LCDs.
So
> > far, I've looked through every catalog and web page I could find with no

luck.
> > All the 7-seg LCDs come wrapped up as panel meters, up counters, etc.
> >
> > I could use an up/dn counter too (that's what I really want anyway), but
> > nobody seems to make any of those either.
> >
> > Thanks and 73, Michael Tracy, KC1SX
> > mtracy@arrl.org
>
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 21:03:28 +1300
> From: "Mal R Ellis" <malellis@ihug.co.nz>
> Subject: Amplifier - 811A
>
> Help required...
> If anyone out there has a circuit diagram of an Amp using 2 x 811A's that
> works I would appreciate a copy .
>
> 73's ... Mal ZL3DF
>
>
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 23:37:32 -0500
> From: "Leland C. Scott" <no-spam@junk-mail.net>
> Subject: Amplifier - 811A
>
> "Mal R Ellis" <malellis@ihug.co.nz> wrote in message
> news:88cev4fma1@news.ihug.co.nz...
> >
> > Help required...
> > If anyone out there has a circuit diagram of an Amp using 2 x 811A's
that
> > works I would appreciate a copy .
>
> How about using a 572B? You can get the plans on how to build an amplifier
> using this tube from:
>
> http://www.svetlana.com/docs/TechBulletins/technoteNO.34.html
>
> --
> 73's,
>
> Leland C. Scott

> KC8LDO
>
> ARRL member
> NCI member
>
> "You ask what Morse Code is good for? I'll tell you. Morse
> Code is used exclusively by Electronics Based life forms to
> communicate amongst themselves using advanced Organic
> Digital Signal Processors, running state of the art Artificial
> Intelligence Software, to perform the highly complex
> transmit encryption, receive decryption and error correction
> functions."
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 09:09:41 -0500
> From: Paul Breed <Paul@Rasdoc.com>
> Subject: An Idea for Direct conversion FM data....
>
> >
> > As Rick says, a paging receiver is a simple architecture. I think
Phillips
> > makes some
> > nice direct-conversion ICs. You can also use the RX LO for your TX
signal.
> > I think the PCB layout is more critical when doing a direct conversion
> > receiver, so
> > you still may consider a dual-conversion.
> > If you really need AFSK TX and RX, then the design is a bit more complex
> > than just FSK of the RF.
> > Either approach can be done with a simple CPU, although the use of a DSP
> > would
> > allow much more room for increasing performance by improving algorithms.
> > If its a one-off project, I'd use a Phillips dual conversion integrated
RX
> > IC with a Exar AFSK modem chip, and skip the CPU.
> > Good luck,
> > John Sonnenberg
> > WB9QBF
> >
> This is a packet data system, there HAS to be a CPU, so I thought I'd
> make it
> do as much as possible.
>
> Also I was thinking using a single VCXO as both TX and LO source, so
> the 50hz

> shift to do AFC would be easy.
>
>
>
> Paul
> .
>
> ------------------------------
>
> Date: Wed, 16 Feb 2000 02:46:14 GMT
> From: tj@johnston.net (Tj Johnston)
> Subject: a TNC made with PIC's???
>
> Is anyone or any group currently working on a fully functional TNC
> made with PIC's? It seems these are very popular chips now.. and quite
> versatile. I would love to build my own TNC... in my own case... using
> these new chips. I am looking to do this for APRS and would love to
> build one with multiple rs-232 inputs for GPS, RDF and such...
>
> Unfortunately I am not up to speed on PIC's ... yet... and would hate
> to re-invent the wheel.. if someone else is doing this already.
>
> Tj Johnston, N4UYQ
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 12:43:39 GMT
> From: "Thomas C. Sefranek" <tcs@cmcorp.com>
> Subject: Car batteries; and the charging of
>
> Chris Kelliing wrote:
>
> > I have a car battery that no longer has a battery, and thought it would
do
> > good as a emergency power supply. What I would like to do is use my
Astron
> > power supply to keep the battery charged. Does anyone have some ideas
or
> > schematics for a protection circuit?
> >
> > Thanks,
> > Chris Kelling
> > N1WKO
>
> Your Astron can not overcharge the battery.
> (It does not have high enough voltage output.)
> So the battery will never be full charged.
> DO add a fuse/Circuit breaker AT THE BATTERY terminals.

> (So you don't fuse the screwdriver/wrench etc...)
>
> --
> *
> | __O Thomas C. Sefranek tcs@cmcorp.com
> |_-\<,_ Amateur Radio Operator: WA1RHP
> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>
> http://hamradio.cmcorp.com/inventory/Inventory.html
> http://www.harvardrepeater.org
>
>
> .
>
> ----------
>
> Date: Tue, 15 Feb 2000 20:48:24 +0100
> From: "RA-News" <he@wanadoo.fr>
> Subject: Important message from France CFRR
>
> This is an important message
>
> from : CFFR Confederation of French Radioamateurs and Radiolisteners
>
> to : All radioamateurs
>
> to get the original file of this message, it is nessecary to connect :
>
> http://www.cfrr.org/cfrr_actuels/cominfo0002.pdf
>
> and for an "smell of it" .....: (perhaps you like to have a look to our
> page ? it's easy at : http://www.cfrr.org for any information of our
> confederation / or connect http://www.sldx.net for an taste of the
life
> of an small radioamateur club located in the triangle (and the heart of
> Europe) of LX,F and DL
>
> COMMUNIQUE SPECIAL D'INFORMATION de la C.F.R.R.
>
>
> du 5 f�vrier 2000 N° 2000-02
>
> Jugement du Conseil d'Etat. Un fait sans pr�c�dent dans les annales du
> radioamateurisme fran�ais.
> S�ance du 5 janvier 2000 - Lecture du 26 janvier 2000 - Notification du 3
> f�vrier 2000
> Les requ�rants ont re�u le 4 f�vrier 2000 la d�cision du Conseil d'Etat
> concernant la r�glementation amateur.
>

> Extrait des conclusions du Conseil d'Etat :
>
> « ..qu'ainsi les dispositions des articles 2, 3, 4 et 13 de la d«cision
> homologu«e par l'arr«t« attaqu« ont «t«
> prise par une autorit« incomp«tente ; que ces dispositions «tant
> indivisibles des autres articles de la d«cision
> 97-453 du 17 d«cembre 1997 de l'autorit« de r«gulation des
> t«l«communications, les requ«rants sont fond«s «
> demander l'annulation de l'arr«t« du 14 mai 1998 du secr«taire d'Etat « l'
> industrie en tant qu'il homologue
> cette d«cision. «
>
> DECIDE
>
> Article 1er: : L'arr«t« du 14 mai 1998 du secr«taire d'Etat « l'industrie
> est annul« en tant qu'il homologue la
> d«cision 97-453 du 17 d«cembre 1997 de l'autorit« de r«gulation des
> t«l«communications fixant les
> conditions d'utilisation des installations de radioamateurs et de
d«livrance
> des certificats et des indicatifs
> radioamateurs.
>
> L'article 2 : («num«re les noms et qualit«s des requ«rants.)
>
> Cons«quemment,
> "La R«publique mande et ordonne au ministre de l'«conomie des finances et
de
> l'industrie en ce qui le
> concerne et « tous huissiers « ce requis en ce qui concerne les voies de
> droit commun contre les parties
> priv«es de pourvoir « l'ex«cution de la pr«sente d«cision."
>
> La CFRR ajoute que pour toute information relative aux cons«quences de
droit
> de la d«cision d'annulation, les
> radioamateurs peuvent s'enqu«rir aupr«s de l'administration de tutelle ou
de
> la seule des trois f«d«rations de la
> concertation nationale ayant donn« quitus « l'ART.
>
> Ce communiqu« est disponible sur le r«seau packet et Internet
> (http://www.cfrr.org) et libre de diffusion sous
> r«serve qu'elle soit int«grale.
>
> Fin du communiqu« n« 2000 - 02
>
> Le Pr«sident
> Bernard SINEUX / F5LPQ

>
>
>
>
> Conf�d�ration Fran�aise des Radioamateurs et Radio�couteurs
>
> Association ¤ but non lucratif, r�gie par la loi 1901
> _____
> C.F.R.R. - Conf�d�ration Fran�aise des Radioamateurs et Radio�couteurs.
> Si�ge social : 26, rue Dagorno
> 75012 PARIS FRANCE
> E-mail : cfrr@cfrr.org - Serveur : http://www.cfrr.org
>
>
>
>
>
>
>
> .
>
> ---
>
> Date: Wed, 16 Feb 2000 00:19:56 GMT
> From: LA8AK@online.no (J M Noeding)
> Subject: Looking For a Home Built Big DC Power Supply.
>
> On Tue, 15 Feb 2000 04:09:25 GMT, rcnixon@mindspring.com (Russell C.
> Nixon) wrote:
>
> >Jan-Martin,
> >
> > Give the article a look. the directions are really quite
> >explicit and the secondaries are wound with copper sheet. If I were
> >in the market for a power suply project, I would try it. Fortunatly,
> >a Drake TR-7 and PS-7 (25 amps at 13.8 volts) came my way and if I
> >need a LOT of DC, I can adapt the PS-7.
> >
> >Russ - KF4WXD
> >
> Hi
>
> might consider it, 45A isn't too much, have a 300W linear amplifier,
> 60A is probably closer to the real demand
>
> >LA8AK@online.no (J M Noeding) wrote:
> >
> >>.
> >>Nixon wrote:
> >>

>
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 12:35:14 -0500
> From: Ron <w8ron@stratos.net>
> Subject: murata ceramic filters: where to buy?
>
> Sometimes you can get samples.
> Try Hosfelt Electronics....they have some at 455 Kc 6KC at about $.30 each
> ---
> Ron
>
>
> Ax9909 wrote:
>
> > looking for a source of murata ceramic if filters. have not been having
any
> > luck finding a vendor who can supply in small lots, 1,2 or 3 at a time.
i have
> > a need for three or four different types [band widths]. these filters
are at
> > 455khz and come in many different pass-band widths and numbers of
internal
> > elements. i am looking for 6, 9 and 15 element units. the band widths
i would
> > be interested in are as follows: -6db -60db
> > 4 kc..... to .....10 kc
> > 6 kc..... to.....15 kc all filters must be
1500 to
> > 2000 ohm
> > 12 kc.....to.....22 kc impedence, input and
output.
> > 15 kc.....to.....25 kc
> >
> > if anyone has things like these or can point me in the right direction
to find
> > a vendor, your help will be greatly appreciated.....thanks to
all....."george"
> >
> >
> >
>
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 12:34:15 -0500

> From: Ron <w8ron@stratos.net>
> Subject: murata ceramic filters: where to buy?
>
> Sometimes you can get samples if you pretend to be experimenting.
> Try Hosfelt Electronics....they have some at 455 Kc 6KC at about $.30 each
> ---
> Ron
>
>
> Ax9909 wrote:
>
> > looking for a source of murata ceramic if filters. have not been having
any
> > luck finding a vendor who can supply in small lots, 1,2 or 3 at a time.
i have
> > a need for three or four different types [band widths]. these filters
are at
> > 455khz and come in many different pass-band widths and numbers of
internal
> > elements. i am looking for 6, 9 and 15 element units. the band widths
i would
> > be interested in are as follows: -6db -60db
> > 4 kc..... to .....10 kc
> > 6 kc..... to.....15 kc all filters must be
1500 to
> > 2000 ohm
> > 12 kc.....to.....22 kc impedence, input and
output.
> > 15 kc.....to.....25 kc
> >
> > if anyone has things like these or can point me in the right direction
to find
> > a vendor, your help will be greatly appreciated.....thanks to
all....."george"
> >
> >
> >
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 11:45:41 -0800
> From: Don W6JL <W6JL@ixpres.com>
> Subject: PARTS source?
>
> Don't overlook Dan's Small Parts. Good prices, wide assortment.
>
> 73,

> Don, W6JL
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 20:49:58 GMT
> From: A Jury <gdbear1@juno.com>
> Subject: PARTS source?
>
> Does he have a web page? Thanks, ARt. KF7GD
>
> Don W6JL wrote:
> >
> > Don't overlook Dan's Small Parts. Good prices, wide assortment.
> >
> > 73,
> > Don, W6JL
> .
>
> ---
>
> Date: Tue, 15 Feb 2000 14:41:05 -0800
> From: ac6v <ac6v@ix.netcom.com>
> Subject: PARTS source?
>
> A Jury wrote:
>
> > Does he have a web page? Thanks, ARt. KF7GD
> >
> > Don W6JL wrote:
> > >
> > > Don't overlook Dan's Small Parts. Good prices, wide assortment.
> > >
> > > 73,
> > > Don, W6JL
>
> -------
> Art -- Dan's small parts is at URL:
> http://www.fix.net/dans.html
>
> Dozens and dozens more at URL:
> http://www.ac6v.com/pageaaa.html
>
> --
> 73 From Rod In San Diego
> ----
> AC6V INDEX TO DX AND HAM RADIO
> FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
> Over 565,000 visits on the counter

> http://www.ac6v.com/ -- General Ham Radio
> http://www.ac6v.com/pagedx.html -- DX Reference Pages
>
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 22:53:13 GMT
> From: Xjshillw6ivw@earthlink.net (Jim Hill)
> Subject: Polystyrene Sources?
>
> Does anyone know where clear polystyrene rods, tubes, or sheets can be
> purchased? McMaster Carr used to carry it, for a price, but currently
> only lists white high-impact polystyrene. I want low-loss material,
> but they list their product as a "poor electrical insulator"
> Thanks, Jim
> Delete the X before using my e-mail address.
> The X was added to stop spam.
> .
>
> ------------------------------
>
> Date: 16 Feb 2000 11:55:16 GMT
> From: jphelan501@aol.com (JPhelan501)
> Subject: Roller Inductor Lubrication
>
> To the person who wanted to know the consensus of this discussion:
> (I'm sorry I lost the thread due to a computer malfunction...)
> Many and different substances were suggested for use as a lubricant for
roller
> inductors.
> They were: (I hope I have remembered them all)
>
> WD-40
> Tuner cleaner/lube spray
> conductive grease
> silicone grease
> teflon spray
> ear wax !
>
> If I've left anything out, please feel free to fill in.
>
> I was trying to be funny when I said "Aint tellin'", but the truth is, I
> haven't tried anything yet to lube the roller inductor. I'm leaning toward
the
> tuner cleaner/lube spray. I'll post how that works after I get the
inductor
> motor drive working.

> So, there are your choices so far!
>
> 73 de John N3DRA
> .
>
> ------------------------------
>
> Date: 16 Feb 00 00:22:20 GMT
> From: rocci@att.NET (Rocci)
> Subject: subscribe
>
> subscribe
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 09:20:34 -0800
> From: ac6v <ac6v@ix.netcom.com>
> Subject: URL For Ham-Homebrew Digest???
>
> Regarding Ham-Homebrew Digest V2000 #46
> Is this digest from
> http://ftp.ucsd.edu/
> ???
> Would like to link to same.
> -------
> FYI: Lots of HomeBrew Links at URL:
> http://www.ac6v.com/pagehb.html
>
> --
> 73 From Rod In San Diego
> ----
> AC6V INDEX TO DX AND HAM RADIO
> FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
> Over 565,000 visits on the counter
> http://www.ac6v.com/ -- General Ham Radio
> http://www.ac6v.com/pagedx.html -- DX Reference Pages
>
>
> .
>
> ------------------------------
>
> Date: Wed, 16 Feb 2000 05:22:50 GMT
> From: "John DeGood" <nu3e@arrl.net>
> Subject: VFD driver chips
>
> Wow, this brings back some really old memories! These chips were indeed

> manufactured by Rockwell. They integrated a display controller and high
> voltage display drivers, and were manufactured using a unique high voltage
> PMOS process proprietary to Rockwell. Both parallel and serial interfaces
> were included. They were very neat chips in their day, as they typically
> replaced a microprocessor and a handful of high voltage display drivers.
>
> The early production years of the Hewlett-Packard 5890A gas chromatograph
> used these chips to drive the front panel display. I designed the display
> board in that instrument in the early 80s, and although I am a terrible
> packrat, I just searched the old files in my basement and I don't appear
to
> have retained copies of those Rockwell data sheets.
>
> In order to use the chips you'll need their command set which is specified
> in the Rockwell data sheets. There is a special initialization sequence
> required, and various commands to take advantage of different display
> features, e.g. brightness, blinking, cursors, special characters, etc.
> Regrettably, I don't have a copy of the code I wrote to do that, either!
>
> If you obtain a copy of the data sheets from Rockwell or somewhere else
and
> have questions, feel free to contact me and I'll try to help. Good luck!
>
> 73,
>
> John NU3E
>
> "Jeff Avery" <ns.ve1jfa@rac.ca> wrote in message
> news:ns.ve1jfa-1402001838050001@ts2-d24.mby.auracom.com...
> > I need some info on two vacuum fluorescent driver chips. I have searched
> > the web and have put a message on sci.electronics.components but have
had
> > no replies. So I am turning to the ham radio community where I have
found
> > help in the past.
> >
> > The first driver chip is numbered 10938P-50 and also 10940-16. The
second
> > driver chip is numbered 10939P-50 and also 10939-11. I think the logo on
> > the chips is Rockwell.
> >
> > The drivers are on a board that I would like to use in a project. It
> > contains a 1 line x 20 character (5 x 7 dots) Vacuum Fluorescent
Display,
> > the driver chips, and circuits to create the required voltages.
> >
> > Can anyone supply info on these two driver chips?
> >
> > --

> > Jeff
> >
> > To reply, remove "ns." from my email address.
>
>
> .
>
> ------------------------------
>
> Date: 15 Feb 00 14:47:59 GMT
> From: af389@lafn.ORG (David Shalita)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> Hi Richard,
>
> I tried and failed to look at this web site.
>
> 73, W6MIK
>
> ============
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> >Available now borads and controllers for this project
> >
> >see http://www.iinet.net.au/~richardh/vfostab
> >
> >Count to 30 MHz 10Hz resolution
> >Interfaces to 16 by 2 LCD displays
> >16 user settable offsets +/- to 10 Hz
> >PLL VFO stabilizer automatic lock invisible to the user.
> >
> >Board PTH/masked/overlay
> >Programmed controller Atmel AT90S1200
> >
> >Board+micro AUS$35.00 P+P $3.00
> >
> >E mail me at richardh@iinet.net.au
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 11:31:06 -0500
> From: blackm00@cam.org (Michael Black)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> In article <38A965D8.28CC283C@lafn.org>, af389@lafn.ORG (David Shalita)
wrote:
>

> > Hi Richard,
> >
> > I tried and failed to look at this web site.
> >
> > 73, W6MIK
> >
> But this works: http://www.iinet.net.au/~richardh/vfostab.htm
>
> Michael VE2BVW
>
> > ============
> > From: richardh@iinet.net.au (Richard Hosking)
> > Subject: VFO Stabilizer/Frequency Counter Boards
> >
> > > >Available now borads and controllers for this project
> > > >
> > > >see http://www.iinet.net.au/~richardh/vfostab
> > > >
> > > >Count to 30 MHz 10Hz resolution
> > > >Interfaces to 16 by 2 LCD displays
> > > >16 user settable offsets +/- to 10 Hz
> > > >PLL VFO stabilizer automatic lock invisible to the user.
> > > >
> > > >Board PTH/masked/overlay
> > > >Programmed controller Atmel AT90S1200
> > > >
> > > >Board+micro AUS$35.00 P+P $3.00
> > > >
> > > >E mail me at richardh@iinet.net.au
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 13:56:10 GMT
> From: richardh@iinet.net.au (Richard Hosking)
> Subject: VFO Stabilizer/Frequency Counter Boards
>
> On Tue, 15 Feb 2000 05:07:50 GMT, richardh@iinet.net.au (Richard
> Hosking) wrote:
>
> > >
> > >>Available now borads and controllers for this project
> > >>
> > >>see http://www.iinet.net.au/~richardh/vfostab.htm
> > >>
> > >>Count to 30 MHz 10Hz resolution
> > >>Interfaces to 16 by 2 LCD displays
> > >>16 user settable offsets +/- to 10 Hz
> > >>PLL VFO stabilizer automatic lock invisible to the user.

> >>
> >>Board PTH/masked/overlay
> >>Programmed controller Atmel AT90S1200
> >>
> >>Board+micro AUS$35.00 P+P $3.00
> >>
> >>E mail me at richardh@iinet.net.au
> >
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 15:47:03 GMT
> From: JW <jdwalton@home.com>
> Subject: Will this blow-up?
>
> I built a small "static" tube-tester which just measures the difference
> in plate current for a 1Volt change in grid bias. That's easy, I just
> change the pot in the control leg for a 1V change in output from an
> LM337.
>
> To get a little more complicated, however, I was wondering if one could
> "modulate" an LM337 in its "adjustable" mode by lifting the control leg
> from ground and inserting a 1V RMS sine wave. I have done this to make
> an adjustable 0-30V negative supply simply by inserting a positive
> reference in the control loop. (As you know, the lower limit of the
> LM337 is -1.25 unless you insert +1.25).
>
> How angry is the LM337 goint to be if it is modulated in this fashion?
> I was thinking of only a 1kHz sine wave.
>
> Well, it's on to the breadboard.
>
> .
>
> ------------------------------
>
> Date: Tue, 15 Feb 2000 17:04:11 GMT
> From: Laura Halliday <va3ldh@sympatico.ca>
> Subject: Will this blow-up?
>
> JW wrote:
>
> > To get a little more complicated, however, I was wondering if one could
> > "modulate" an LM337 in its "adjustable" mode by lifting the control leg
> > from ground and inserting a 1V RMS sine wave. I have done this to make
> > an adjustable 0-30V negative supply simply by inserting a positive
> > reference in the control loop. (As you know, the lower limit of the

> > LM337 is -1.25 unless you insert +1.25).
> >
> > How angry is the LM337 goint to be if it is modulated in this fashion?
> > I was thinking of only a 1kHz sine wave.
>
> This kind of thing works fine and is the principle behind
> popular designs for Gunn diode modulators.
>
> Why not try it and see? Personally, I'd rather see "I tried
> it and this is what happened..." than "Will this work?"
> --
> Laura Halliday VA3LDH "Laisse le vent tout emporter..."
> Grid: FN03gs - Foly/Viennet
> .
>
> ------------------------------
>
> End of Ham-Homebrew Digest V2000 #47
> ******************************
>

1270. Re: Roller Inductor Lubrication

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Mike Monett <mkmonett@hotmail.com>
Message-ID: <38AAE7EA.65FC@hotmail.com>
Source record: 63225

JPhelan501 wrote:
>
> To the person who wanted to know the consensus of this discussion:
> (I'm sorry I lost the thread due to a computer malfunction...)
> Many and different substances were suggested for use as a lubricant for roller
> inductors.
> They were: (I hope I have remembered them all)
>
> WD-40
> Tuner cleaner/lube spray
> conductive grease
> silicone grease
> teflon spray
> ear wax !
>
> If I've left anything out, please feel free to fill in.
>
> I was trying to be funny when I said "Aint tellin'", but the truth is, I
> haven't tried anything yet to lube the roller inductor. I'm leaning toward the
> tuner cleaner/lube spray. I'll post how that works after I get the inductor
> motor drive working.
> So, there are your choices so far!
>
> 73 de John N3DRA

Ordinary vaseline if the inductor does not get too hot from skin effect.
Replace every 6 months.

The vaseline is a hydrocarbon and cleans off surface films and debris. It
allows a true metal-to-metal contact, and provides a barrier to prevent
contamination.

My measurements show the contact resistance may decrease by a factor of
ten and becomes much more stable.

Comparing the results across multiple samples of the same kind of
connection shows the contact resistance becomes much more uniform from
unit to unit.

This works on any kind of electrical connection that stays cool. Nicad
and alcaline batteries, ram chips, high-current connectors, pcb gold
fingers, you name it.

It works. Just have to replace it after six months, which you need to do
with any contact cleaner.

Best Regards,

Michael R. Monett
mailto:mkmonett@hotmail.com

1271. Need #12 Fuse lamp - HELP!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <uiCq4.237185$5r2.603970@tor-nn1.netcom.ca>
Source record: 63226

I am looking for a #12 fuse lamp (Chicago Miniature) for my Pin Diode switch (PSK-1500).

The manufacturer, Design Electronics, is long gone.

Where can I find a #12 Fuse Lamp??

73'

Rob

1272. FS: TRANSFORMER WINDER

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <88euso$6gr$1@ns2.foothill.net>
Source record: 63227

LARGE HEAVY TRANSFORMER WINDER. with Box of Bobbins and other transformer parts.. Has 3/16 H.P. motor. Variable speed, and reversible. Counter and transmission. Heavy steel platform. PICK UP ONLY!!!!
in Auburn California, 30 miles NE of Sacramento.
$`100.00

See Pics.

htt[://www.foothill.net/~soundval/TWIND-1.JPG
htt[://www.foothill.net/~soundval/TWIND-2.JPG
htt[://www.foothill.net/~soundval/TWIND-3.JPG
htt[://www.foothill.net/~soundval/TWIND-4.JPG

Eugene Rippen, 105 Donnington, Auburn, CA 95603

1273. TS-140S PLL UNLOCK error

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <38ab0a60@news.marun.edu.tr>
Source record: 63228

Dear om
if you can help me I`ll be happy :)

I have a Transceiver (Kenwood TS-140S)
But it is not work now

SYMPTOMS :

First time : good receive but audible alarm " UNLOCK "
with morse code time to time .

Now : - open display firs time (forexample 14.000.00)
- after opened display (like . . . . .)
- not receive also not any sound or hiss
- not transmit
- alarm " UNLOCK " with morse code repeatly .
- when I rotate Tuning knob display is open
like 14.230.00 but again . . . . . .after 1 second.

I measured 3.2V on back-up lithium battery .

TA2AD Sua TORTU TURKEY

1274. Re: Need #12 Fuse lamp - HELP!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: jstroppe@uhl.uiowa.edu
Message-ID: <88f58l$nb6$1@flood.weeg.uiowa.edu>
Source record: 63229

Hey Bob

Is taht a 6.3 volt 0.15a 2-pin G-3 1/2 lamp?

Drop me your email address

john
WA0VYZ

--
John Stroppel | Internet: jstroppe@uhl.uiowa.edu
The University of Iowa - Hygienic Lab | Amateur Radio: WA0VYZ
Oakdale Research Campus, OH-M7A | Voice: (319) 335-4500
Iowa City, IA 52242 | Fax: (319) 335-4555

1275. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <jZEq4.4655$84.507012@alfalfa.thegrid.net>
Source record: 63230

Try the VHF UHF Manual by G. R. Jessop G6JP fourth edition.
it's ISBN 0 900612 92 4 printed in Great Britan, but can be found
stateside. The tube schematics are great, but assumes you have experience
building amps. It's not a "how to" book. I'm asking for help myself on
building an amp using a pair of 4CX 250's. My problems are with building
the HV supply. I'll be experimenting with transformers out of dead
microwave ovens. It might save some serious money on transformers. If you
come up with something else that better addresses construction please let me
know. Thanks! mark KC7LTV ssparky2@thegrid.net remove one "S" in my
e-mail address, like this: sparky2@...
Martin Rask wrote in message <_q2m4.4347$jg4.6910@nntpserver.swip.net>...
>Hello
>I would like to get information on how to build a 2m tube amplifier with 2X
>4CX250B or some other tubes
>The amplifier should produce more than 500W on SSB
>best regards Martin SM7VHS
>
>
>
>
>

1276. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <zcFq4.4657$84.507731@alfalfa.thegrid.net>
Source record: 63231

Hook it up through a small 14V bulb. The bulb will limit the charging
current. Use an 1156 automotive taillight bulb, or anything smaller. This
is the cheapest, easiest way I know of. Good luck!
Chris Kelliing wrote in message <88aotl$da2$1@bob.news.rcn.net>...
>I have a car battery that no longer has a battery, and thought it would do
>good as a emergency power supply. What I would like to do is use my Astron
>power supply to keep the battery charged. Does anyone have some ideas or
>schematics for a protection circuit?
>
>Thanks,
>Chris Kelling
>N1WKO
>
>

1277. HV supply from oven transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <vtFq4.4661$84.508131@alfalfa.thegrid.net>
Source record: 63232

Does anyone have experience using old microwave oven transformers for a HV supply? I'm collecting parts for an RF deck with a pair of 4CX250R tubes. I'm using the schematic from the 'VHF UHF Manual' by Jessop. The transformer I scrounged gives 3,000 volts after a full wave bridge and a 16 Mfd cap,which is too high. I'm shooting for 2,000 to 2,500 volts. The current seems to be there given what the oven draws from the 110v side. I'm going to scrounge some more transformers to see if they give a usable voltage. I'd really like to hear from someone who's had experience doing stuff like this. My Elmer became a silent key last fall, so I could use some help. Please post a reply to the group or E-mail me.
ssparky2@thegrid.net
Remove one 'S' in front of the address. It should say sparky2@...
Many thanks to you all. mark KC7LTV "Lake Tahoe Voice"

1278. SB-220/221 Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <JpGq4.619$Nf5.168@nntp0.chicago.il.ameritech.net>
Source record: 63233
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi All,
I need a meter for an SB-220/221 for a repair for a friend. Condition of plastic is not important as I can swap out the guts.

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

1279. Re: a TNC made with PIC's???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: ksproul@noc.rutgers.edu
Message-ID: <ksproul-1602001940120001@sproul-mac.rutgers.edu>
Source record: 63234
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,alt.hamradio.packet

TAPR has both the PIC-E and the MIC-E that doe exactly this..

Check out:

http://www.tapr.org

Keith Sproul, WU2Z,

In article <38aa0dc6.15578277@news.mindspring.com>, tj@johnston.net (Tj Johnston) wrote:

> Is anyone or any group currently working on a fully functional TNC
> made with PIC's? It seems these are very popular chips now.. and quite
> versatile. I would love to build my own TNC... in my own case... using
> these new chips. I am looking to do this for APRS and would love to
> build one with multiple rs-232 inputs for GPS, RDF and such...
>
> Unfortunately I am not up to speed on PIC's ... yet... and would hate
> to re-invent the wheel.. if someone else is doing this already.
>
> Tj Johnston, N4UYQ

1280. Re: SB-220/221 Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <mSHq4.744$Nf5.188@nntp0.chicago.il.ameritech.net>
Source record: 63235
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi Tom,
Thanks for the reply. That is a myth. The meter is physically the same but the internal resistance and full scale current is different (at least that is what I hear).

If I am wrong, please let me know.

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

tom <tsokol@adelphia.net> wrote in message
news:0CHq4.161$Am.7777@news1.news.adelphia.net...
> Jeff,
>
> I have heard that you can use the meter found in the HM-102
> wattmeter....they are supposed to be identical. It might be easier to find
a
> used HM-102 around.
>
> Tom
> N2LDE
>
> "Jeff Weinberg W8CQ" <w8cqjeff@ameritech.net> wrote in message
> news:JpGq4.619$Nf5.168@nntp0.chicago.il.ameritech.net...
> > Hi All,
> > I need a meter for an SB-220/221 for a repair for a friend. Condition
of
> > plastic is not important as I can swap out the guts.
> >
> > Thanks,
> > --
> > Jeff Weinberg W8CQ
> > w8cqjeff@ameritech.net
> >
> >
> >
>
>

1281. Re: 0-8 RF Ammeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <cbKq4.14897$Cn1.451513@news5.giganews.com>
Source record: 63236
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

In general, when you need something like that, the factory isn't interested in talking to you. Call a distributor, like Allied or Newark and ask them for what you want. Maybe they can't help but they will talk to the factory, and probably get more action than you can. Or a representative of the company that made the equipment, although it's probably too old for that.

73, Bob K6DDX

1282. 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <38AB8684.6DA2B4C1@NO-SPAMtcainternet.com>
Source record: 63237

Greetings,

Here's yet another one of my dumb questions. (U guys have a great sense of humor! Tnx for putting up with me)

I'm thinking of building a small HF amp for CW and SSB with a couple of 4-65As that I have laying around. My questions are as follows since I cannot find a circuit diagram using these guys.

I understand that this is one tube that CANNOT be run with grids grounded so:

If I go cathode driven, how do I calculate the amount of drive required for full output?

If I go grid-driven, how do I calculate the correct amount of grid 'swamping'. (The transmitters I have currently run single 6146 finals at about 90 W input)

In either case, any other configuration tips that are particular to these tubes from anyone with experience with them would be most welcome as well. (like their favorite plate / grid voltages, etc)

Thanks a lot guys (and gals???)

NOTE: To reply directly to me, please remove NO-SPAM from my email address. Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM received as a result of posting to these newsgroups, I find no other easy solution.

--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address will not be tolerated. All spam is subject to a $200 per incident processing fee and possible legal action pursuant to federal regulations.

1283. Re: 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-16 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <nCMq4.17687$TS5.480311@news6.giganews.com>
Source record: 63238

Well if you can't ground the grids I guess you can't drive the cathodes. So if it's grid driven, you will probably need only a Watt or two for full power. That should give you enough information to calculate the swamping network. You might as well drive them from the driver of the exciter rather than using the final and throwing away 50 Watts of RF.

You didn't indicate what mode you will use, and whether you want the amplifier to be linear or not. If not, you can run it class C. In AB though the drive power will be very small.

I can't help you much more except that you can duplicate the circuitry of the exciter's final amplifier and hit it pretty close. As to the proper tube potentials, consult a data sheet.

73, Bob K6DDX

1284. Re: SB-220/221 Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: tom <tsokol@adelphia.net>
Message-ID: <0CHq4.161$Am.7777@news1.news.adelphia.net>
Source record: 63239
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Jeff,

I have heard that you can use the meter found in the HM-102
wattmeter....they are supposed to be identical. It might be easier to find a
used HM-102 around.

Tom
N2LDE

"Jeff Weinberg W8CQ" <w8cqjeff@ameritech.net> wrote in message
news:JpGq4.619$Nf5.168@nntp0.chicago.il.ameritech.net...
> Hi All,
> I need a meter for an SB-220/221 for a repair for a friend. Condition of
> plastic is not important as I can swap out the guts.
>
> Thanks,
> --
> Jeff Weinberg W8CQ
> w8cqjeff@ameritech.net
>
>
>

1285. Re: Ramsey Kits: to buy or not to buy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: maddog@io.com
Message-ID: <38ab67d5.93696350@news.io.com>
Source record: 63240

On Sat, 12 Feb 2000 15:03:13 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>I've improved the contact pressure on a number of battery packs by
>putting a glob of RTV under the contact. This works well for leaf-spring
>type contacts, but of course won't work for some other types.

Alright! Thanks for the tip, Roy... the same problem has been driving
me nuts for ages...

73,
monty

1286. Re: TS-140S PLL UNLOCK error

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <FJKq4.48871$ox5.12875750@tw11.nn.bcandid.com>
Source record: 63241

In article <38ab0a60@news.marun.edu.tr>, ta2ad@yahoo.com says...
>
>Dear om
>if you can help me I`ll be happy :)
>
>I have a Transceiver (Kenwood TS-140S)
>But it is not work now
>
>SYMPTOMS :
>-------------------
>
>First time : good receive but audible alarm " UNLOCK "
> with morse code time to time .
>
>Now : - open display firs time (forexample 14.000.00)
> - after opened display (like . . . . .)
> - not receive also not any sound or hiss
> - not transmit
> - alarm " UNLOCK " with morse code repeatly .
> - when I rotate Tuning knob display is open
> like 14.230.00 but again . . . . . .after 1 second.
>
> I measured 3.2V on back-up lithium battery .
>
> TA2AD Sua TORTU TURKEY
>
>Kenwood had this problem in several rigs. TS-440 was most affected.
There is a pliobond rubberized glue used in the v.c.o. circuit that
is normally a light tan color. It darkens to a brown or chocolate
color and becomes conductive. You must dig this glue carefully away
from the circuit board with a small dental pick, or pointed object.
Do not use a knife. This should restore the rig to normal operation.

1287. Re: 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Barry Ornitz <ornitzNO@SPAMtricon.net>
Message-ID: <EANq4.3561$bz2.669900@tw12.nn.bcandid.com>
Source record: 63242

Randall D. DuCharme wrote in message
<38AB8684.6DA2B4C1@NO-SPAMtcainternet.com>...
>I'm thinking of building a small HF amp for CW and SSB with a couple of
4-65As
>that I have laying around. My questions are as follows since I cannot
find a
>circuit diagram using these guys.
>
>I understand that this is one tube that CANNOT be run with grids grounded
so:

Correct, but you can still run them cathode driven with the proper bias voltages applied to the grid and screen.

>If I go cathode driven, how do I calculate the amount of drive required
for
>full output?

Look at the Class B data if you have it. Typically this will be for audio operation and the tubes will be run in push-pull. At RF, this is not necessary and the tubes are usually run in parallel. The grid bias will be that specified for audio service. The screen will also need the specified voltage. Both the grid and screen are "grounded" for RF with multiple, low-inductance bypass capacitors but these tube elements have their normal operating voltage.

The drive voltage will be the same as the Class B peak-to-peak drive voltage. However, the plate current will also flow through the cathode. This means the approximate drive impedance is the drive voltage divided by the plate current. With a pair of 4-65, this will likely be higher than 50 ohms. Knowing the voltage and current, you can calculate the drive power and what sort of impedance matching network will be needed to match the driver to the cathodes.

If the grid, screen, and beam-forming electrodes have a very low RF impedance to ground, the cathode driven amplifier will probably not need neutralization.

>If I go grid-driven, how do I calculate the correct amount of grid
>'swamping'. (The transmitters I have currently run single 6146 finals at
>about 90 W input)

A similar procedure is needed. Look at data for Class AB1, AB2, or B operation. The peak-to-peak drive voltage will be specified (and for AB2 or B operation, the grid current will also be specified). The specified grid bias and screen bias will still be needed. Your driver likely has

more than enough drive voltage (I don't have a 4-65 data sheet handy) to provide the P-P RF input voltage. If so, you can use a 50 ohm dummy load as the "swamping" resistor (AC coupled from the grid to ground) and back off on the drive for proper operation. To get more fancy, you can tap this resistance down to provide the proper drive yet absorb the driver's full power. If you do not have enough drive voltage, you can use a 1:4 impedance transformer on the input to double the drive voltage and quadruple the swamping resistance.

If the "swamping" resistor is low in value (generally less than 100 to 200 ohms), the amplifier should be stable without neutralization. Parasitic suppressors will still be needed, of course.

>In either case, any other configuration tips that are particular to these >tubes from anyone with experience with them would be most welcome as well. >(like their favorite plate / grid voltages, etc)

These little tubes really like a HIGH plate voltage, typically much higher than 811A's and other similar power tubes. Connection to the plate should be with a flexible lead to allow some thermal expansion. And a muffin fan blowing across the tubes is a very worthwhile addition to prolong tube life.

Many hams are confused by cathode driven amplifiers, and the term "grounded-grid" seems to be the real culprit here. Some tubes work fine with zero bias (like the 811A or 572B). Others like the 4-400 and 4-1000 work well with the screen connected to the grid to form a very high mu triode that requires no grid bias. But most tubes are like the 4-65 - the grid cannot be directly grounded. The 4CX250 family of tubes falls in this category. If hams used the term cathode-driven, I think much of the confusion would disappear. Any class of operation: A, AB1, AB2, B, or C can be obtained in cathode-driven or grid-driven operation.

73, Barry L. Ornitz WA4VZQ ornitzNO@SPAMtricon.net

1288. 624 kits TR Switch

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: martek <martek@internet-zahav.net>
Message-ID: <01bf7925$493627e0$179b75c0@mark>
Source record: 63243

Does anyone have the manual or schematic for the 624 Kits

TR Switch kit Model CNT-1 ????

Thanks,

Mark KU4M

1289. Info Wanted: Thordarson S502484

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-9751AE.05380917022000@news.erols.com>
Source record: 63244

Any info on the following is most appreciated.

Thordarson iron:

Model S502484 HV Transformer

Model S502487 Filter Choke

1290. Re: Program to print your own meter scales

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: John Mortlock <jmort@global.freeserve.co.uk>
Message-ID: <88gu3c$g7h$1@news7.svr.pol.co.uk>
Source record: 63245
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

nobody@nowhere.com wrote in message ...
>
>Gary Coffman KE4ZV writes
>>Autosketch is *much* cheaper than AutoCad. $99 as I recall.
>>In some ways it is even a better program than its big brother.

>For uk people,
>Autosketch 5 can be obtained for a fiver at the moment, its on
>one of the CD's with this months PC Plus magazine.
>Haven't installed it yet but claims to be the full product.

I just got Autosketch 5 and have created several professional
looking meter scales. The software is very easy to use unlike
some other drawing packages.

I'll also be using it to create front panel lettering on home brew
equipment. Just print on to clear overhead transparency film
and overlay it on the front panel.

John G3UGY

1291. Where to get Pin Diodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Rob <Pse@NoEmail.Com>
Message-ID: <gyUq4.26$hB1.1238@tor-nn1.netcom.ca>
Source record: 63246

Hello,

I am looking for replacement Pin Diodes for a Pin Diode RF switch but have had trouble finding any sources. The Pin Diodes part numbers are:

UNITRODE UM-4001D
UNITRODE UM-9415

Manufacturer??? KS-1001 (or is it K5-1001)

Does anyone have any ideas where I might be able to purchase these Pin Diodes??

Does anyone have the specs on these Pin diodes?? Are there substitute pin diodes made by other companies??

Any help would be appreciated.

73's
Rob
amtor_REMOVE_BIRD_Bluejay@hotmail.com

1292. OT: audio cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38AC1A52.C9684649@lafn.org>
Source record: 63247

Hi,
Can someone point me to a LOW COST supplier of single conductor
shielded audio cable I can use in homebrew projects.

Currently I am using RG174 coax but it is "way too stiff",
and is a litle to large at 0.110 inch diameter,
and 11 cents per foot is too costly. Flexibility is major concern.

Most suppliers have a very large min order, example Allied.

I am caniballizing VCRs and TV sets, but yield is very small.
Also, I have used the cable from walkman ear buds,
but this is TINY fragile shielded cable. Need larger diameter than that
to insure can prep cable without SMT techniques.

Thanks for hints.
73, W6MIK

--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1293. Re: Where to get Pin Diodes?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Glynn Furr <gfurr@ibm.net>
Message-ID: <38AC1E8E.68B51D1A@ibm.net>
Source record: 63248

Rob wrote:

> Hello,
>
> I am looking for replacement Pin Diodes for a Pin Diode RF switch but have
> had trouble finding any sources. The Pin Diodes part numbers are:
>
> UNITRODE UM-4001D
> UNITRODE UM-9415
>
> Manufacturer??? KS-1001 (or is it K5-1001)
>
> Does anyone have any ideas where I might be able to purchase these Pin
> Diodes??
>
> Does anyone have the specs on these Pin diodes?? Are there substitute pin
> diodes made by other companies??
>
> Any help would be appreciated.
>
> 73's
> Rob
> amtor_REMOVE_BIRD_Bluejay@hotmail.com

Rob,

You might try RF Parts in San Marcos, CA. <www.rfparts.com> I bought several UM9415's from them a while back. They use to have specs at the back of their catalog. They have $25 minimum order but it doesn't take many high power pin diodes to make that.

73, Glynn.. K4RKI@arrl.net

1294. How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: niebur@russell.mb.jhu.edu
Message-ID: <m2k8k3vlrl.fsf@russell.mb.jhu.edu>
Source record: 63249

Hi,

I am looking at VHF/UHF mobiles and, to my surprise, I discovered that only very few of them have DTMF paging (one notable exception being the Kenwood 261 but this seems otherwise to be a so-so rig, if one believes the QST test). So, here is my question: how difficult is it to homebrew a DTMF decoder, ie a little gizmo that switches on a connection only if it sees a certain pre-defined sequence of DTMF tones? Given the ubiquity of DTMF in the phone world and the need to control all kinds of things by DTMF tones, I would imagine there must be chips made just for that and it should be very easy to put together a simple circuit. Is that true? If yes, where can I find information abou that?

I have seen kits from Vectronics or similar that do DTMF decoding but they also do a whole lot of other things (like waiting for the phone to ring for a preselected number of times before switching on etc) which I don't need. Also, these kits are in the >$50.- range which seems like overkill for a very simple thing.

--Ernst KB3CEE

1295. Re: 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <CkVq4.49536$ox5.13145225@tw11.nn.bcandid.com>
Source record: 63250

In article <38AB8684.6DA2B4C1@NO-SPAMtcainternet.com>,
randyd@NO-SPAMtcainternet.com says...
>
>Greetings,
>
>Here's yet another one of my dumb questions. (U guys have a great
sense of
>humor! Tnx for putting up with me)
>
>I'm thinking of building a small HF amp for CW and SSB with a couple of
4-65As
>that I have laying around. My questions are as follows since I cannot
find a
>circuit diagram using these guys.

O.K. here is a little trick I like to use for the family of Eimac
tubes with control grid problems.

Use a 4:1 impedance ratio (2:1) turns ratio balun between the exciter
and the control grid. Then connect 220 ohms of swamping from the grid
to ground. The grid will operate at zero d.c. bias. Use several large
zeners in series from cathode to ground (and a capacitor across them
to conduct r.f. to ground) to establish the bias voltage. Perhaps 50v
will be needed. I use several 50watt zeners in series. Run the screen
at recommended voltage (300 or there abouts) and run the plate on the
high side of specs.

Are your 4-65s any good. If they are old WW2 surplus they may be
so gassey that they are worthless.

73 Gummi

1296. Re: Info Wanted: Thordarson S502484

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <PAVq4.18047$TS5.499675@news6.giganews.com>
Source record: 63251

I believe those part numbers aren't standard catalog items and probably were made for a particular customer. It seems to me that Thordarson part numbers generally had a different scheme.

73, Bob K6DDX

1297. Re: Silver oxide?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <tjWq4.37902$ri.960282@news20.bellglobal.com>
Source record: 63252

K3FDY wrote in message ...
I have often heard that "silver-oxide" is as good, or almost as good, a conductor as the silver itself? Is that a true statement?
Ed, K3FDY.

Yes it is.

1298. Re: SB-220/221 Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38AC54BE.1181@ixpres.com>
Source record: 63253
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi Jeff OM,
I can't help you with the meter, but is it the grid meter?
If so and the old one was zapped, highly likely it was due to a VHF parasitic taking off, and wiping out one or more 3-500Z's, causing a plate current surge which then takes out a lot of the grid metering ckt components, including sometimes the meter. Before firing up with that new meter, see Richard Measures' web page if you are not already aware of vhf parasitic problems he has investigated in lots of commercial and kit amps, including the Heath SB-220.

73 and GL,

Don, W6JL

Jeff Weinberg W8CQ wrote:
>
> Hi All,
> I need a meter for an SB-220/221 for a repair for a friend. Condition of
> plastic is not important as I can swap out the guts.
>
> Thanks,
> --
> Jeff Weinberg W8CQ
> w8cqjeff@ameritech.net

--
ï¿½ï¿½à¡±ï¿½

1299. WTB: 3 or 4 Signetics NE-561 obsolete PLL ships

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: jeffbro@mindspring.com
Message-ID: <88hnjjlbe1@nntp9.atl.mindspring.net>
Source record: 63254

Anybody got a few gathering dust in the parts bin?

Thanks, Jeff

jeffbro@mindspring.com

1300. Re: HV supply from oven transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <Ex%q4.408$rv3.23200@bgtnsc04-news.ops.worldnet.att.net>
Source record: 63255

Hi Mark,
Get a heavy duty 25V transformer, wire it with the opposite phase
(bucking)
in series with the primary of your oven transformer. Drive the primary of
your
bucking transformer with 120V. This will subtract 25v from the line voltage
to your
oven transformer and lower the output to 2375V. You can pick the bucking
transformer that works for you, or you could use a tapped transformer. You
might
even get real fancy and drive the primary of the bucking transformer with a
variac
and have more control of the output.
The secondary of your bucking transformer needs to handle the primary
current of your oven transformer.
Jan/Feb 1998 QEX magazine had an article about using oven transformers
for a HV supply, probably worth trying to get.
Also apparently oven transformers have magnetic shunts that need to be
removed for proper operation as a HV supply for an amp. If left intact it
will
cause poor regulation, according to the QEX article.
Let me know if I didn't explain well.

--
Mike Knowlton
Panama City Fl.

1301. Re: 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-17 00:00:00 UTC
From: "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com>
Message-ID: <38AC9964.7BCC0CCA@NO-SPAMtcainternet.com>
Source record: 63256

Greetings,

Thanks for the tips. They'll be most helpful! As to the 4-65s, I have 4 actually. 2 used, but supposedly full output PL4-65s (Penta Labs) and two new Eimacs but don't know more than that. I bought them CHEEP so maybe they're junk, I don't know. Hope not!

gudmundur wrote:

> O.K. here is a little trick I like to use for the family of Eimac
> tubes with control grid problems.
>
> Use a 4:1 impedance ratio (2:1) turns ratio balun between the exciter
> and the control grid. Then connect 220 ohms of swamping from the grid
> to ground. The grid will operate at zero d.c. bias. Use several large
> zeners in series from cathode to ground (and a capacitor across them
> to conduct r.f. to ground) to establish the bias voltage. Perhaps 50v
> will be needed. I use several 50watt zeners in series. Run the screen
> at recommended voltage (300 or there abouts) and run the plate on the
> high side of specs.
>
> Are your 4-65s any good. If they are old WW2 surplus they may be
> so gassey that they are worthless.

NOTE: To reply directly to me, please remove NO-SPAM from my email address. Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM received as a result of posting to these newsgroups, I find no other easy solution.

--
Randall D DuCharme (KD5IZI) Proud to be 100% Microsoft Free!

Unsolicited commercial email (SPAM) received at this email address will not be tolerated. All spam is subject to a $200 per incident processing fee and possible legal action pursuant to federal regulations.

1302. HIRING: So you wanna be a rocketman?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: space_physics@yahoo.com
Message-ID: <88ijv2$a79$1@nnrp1.deja.com>
Source record: 63257
Cross-posted to: rec.radio.amateur.homebrew,rec.skydiving,sci.space,sci.space.policy

Small Aerospace firm always collecting resumes and future
employment contacts. Titles are irrelevant to us.
In keeping with the history of Aviation, we accept resumes
from everyone: Bicycle mechanics, hobbyists, HAM radio operators,
kit plane builders, rocket enthusiasts, as well as professional
engineers and scientists (undergraduate through graduate).

OPENINGS:

Aerospace Engineering, Electrical/Electronic, Mechanical:

Spacecraft / Rockets-- Design & Project Management, Systems Engineer,
Structures, Payload, Attitude Control, Telemetry, Flight Computer,
Tracking, Power, Thermal, all relevant subsystems from design through
flight following.

Other: Materials Engineering, Chemistry, Physics, Planetary Science,
and other related fields.

Aviation & Technical:

Airframe & Powerplant Technicians, Automotive Technicians, Electrical
Technicians, Machinists, Draftsman, CAD/CAM and other skilled labor
capable of enhancing our projects.

Hobbyists/Other:

Depending upon your skills, we also love working with people like HAMs,
skydivers, ultra-light pilots, kit builders, rocket & balloon
enthusiasts, and remote control fans. Often, these people provide a
valuable, experienced, and unique consulting & skills base in excess of
a standard engineer. Some even have educational and career
qualifications in excess of what we need. So, don't be shy.

COMPENSATION:

Arrangements run from 10% over your maximum job offers with full
employee package (for the super-duper engineers and grad students).

Other options include contractual work and partial ownership on a per
project basis. For example, when our engineers say "Hey! We should work
on something in that area."... we tend to recruit a CEO, CTO, and
project team and place that under a subsidiary relationship.

APPLICATIONS:

Email your resumes to: space_physics@yahoo.com

Thanks in advance for submitting to our HR database. We will not be replying to most applicants. Please indicate the length of time that you would be interested in tenure, geographic preferences, desired compensation range, and list your skills or experience by keyword.

Sent via Deja.com http://www.deja.com/
Before you buy.

1303. Re: How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: Alan Matheson <hokianga@ihug.co.nz>
Message-ID: <88hj4e$12b$1@news.ihug.co.nz>
Source record: 63258

Try Motorolas MC145436 DTMF decoder. Really simple.
Alan Matheson

Prof. Ernst Niebur <niebur@russell.mb.jhu.edu> wrote in message
news:m2k8k3vlrl.fsf@russell.mb.jhu.edu...
>
> Hi,
>
> I am looking at VHF/UHF mobiles and, to my surprise, I discovered that
> only very few of them have DTMF paging (one notable exception being
> the Kenwood 261 but this seems otherwise to be a so-so rig, if one
> believes the QST test). So, here is my question: how difficult is it
> to homebrew a DTMF decoder, ie a little gizmo that switches on a
> connection only if it sees a certain pre-defined sequence of DTMF
> tones? Given the ubiquity of DTMF in the phone world and the need to
> control all kinds of things by DTMF tones, I would imagine there must
> be chips made just for that and it should be very easy to put together
> a simple circuit. Is that true? If yes, where can I find information
> abou that?
>
> I have seen kits from Vectronics or similar that do DTMF decoding but
> they also do a whole lot of other things (like waiting for the phone
> to ring for a preselected number of times before switching on etc)
> which I don't need. Also, these kits are in the >$50.- range which
> seems like overkill for a very simple thing.
>
> --Ernst KB3CEE

1304. Please help TS140S PLL UNLOCK error

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: ta2ad <ta2ad@yahoo.com>
Message-ID: <38ac7253@news.marun.edu.tr>
Source record: 63259

Dear om
if you can help me I`ll be happy :)

I have a Transceiver (Kenwood TS-140S)
But it is not work now

SYMPTOMS :

First time : good receive but audible alarm " UNLOCK "
with morse code time to time .

Now : - open display firs time (forexample 14.000.00)
- after opened display (like . . . . .)
- not receive also not any sound or hiss
- not transmit
- alarm " UNLOCK " with morse code repeatly .
- when I rotate Tuning knob display is open
like 14.230.00 but again . . . . . .after 1 second.

I measured 3.2V on back-up lithium battery .

TA2AD Sua TORTU TURKEY

1305. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: dana <dana@randomc.com>
Message-ID: <Pine.GSO.4.10.10002172146230.15640-100000@cluster2>
Source record: 63260

I thought that a battery had to be charged with rough dc?

On Tue, 15 Feb 2000, Thomas C. Sefranek wrote:

> Date: Tue, 15 Feb 2000 12:43:39 GMT
> From: Thomas C. Sefranek <tcs@cmcorp.com>
> Newsgroups: rec.radio.amateur.homebrew
> Subject: Re: Car batteries; and the charging of
>
>
>
> Chris Kelliing wrote:
>
> > I have a car battery that no longer has a battery, and thought it would do
> > good as a emergency power supply. What I would like to do is use my Astron
> > power supply to keep the battery charged. Does anyone have some ideas or
> > schematics for a protection circuit?
> >
> > Thanks,
> > Chris Kelling
> > N1WKO
>
> Your Astron can not overcharge the battery.
> (It does not have high enough voltage output.)
> So the battery will never be full charged.
> DO add a fuse/Circuit breaker AT THE BATTERY terminals.
> (So you don't fuse the screwdriver/wrench etc...)
>
> --
> *
> | __O Thomas C. Sefranek tcs@cmcorp.com
> |_-\<,_ Amateur Radio Operator: WA1RHP
> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>
> http://hamradio.cmcorp.com/inventory/Inventory.html
> http://www.harvardrepeater.org
>
>
>
>

1306. Re: How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: niebur@russell.mb.jhu.edu
Message-ID: <m2zosx4yb8.fsf@russell.mb.jhu.edu>
Source record: 63261

Thanks to everybody who sent me info about chips made for DTMF
decoding. This is just what I need! Looks like I won't be running out
of projects :)

--Ernst KB3CEE

1307. Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: "Lonnie (NT6B)" <nt6b-vk7lm@dreamsoft.com>
Message-ID: <38AE3B9C.2ABDE1B1@dreamsoft.com>
Source record: 63262

Hello...any help in this area would be appreciated. With 3-500Z tubes, 4.8 volts to 5.0 volts is desirable on the Filaments ...Mine in my 2K2 Henry are running about 5.6 volts each and I am looking for the right a way to reduce the voltage to the acceptable range. The Henry Manual isn't much help...any suggestions on what to do and how to do it?...

73's.....Lonnie (NT6B)

1308. Re: Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-18 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <LHzr4.29027$Cn1.610371@news5.giganews.com>
Source record: 63263

Lonnie, take a page from the Kenwood TL-922 mod info. It is therein suggested to rewire the filaments with 20 AWG wire. It has a high enough resistance to reduce the voltage to where you want it and it won't burn out with the current. It will get warm, so route it intelligently.

In the case of the Henry amplifier, the length of the path may be different so you might want to try different gauges.

73, Bob K6DDX

1309. Re: How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <88l1iv$8a$1@nnrp1.deja.com>
Source record: 63264

In article <m2k8k3vlrl.fsf@russell.mb.jhu.edu>,
niebur@russell.mb.jhu.edu (Prof. Ernst Niebur) wrote:
>
> Hi,
>
> I am looking at VHF/UHF mobiles and, to my surprise, I discovered that
> only very few of them have DTMF paging (one notable exception being
> the Kenwood 261 but this seems otherwise to be a so-so rig, if one
> believes the QST test). So, here is my question: how difficult is it
> to homebrew a DTMF decoder, ie a little gizmo that switches on a
> connection only if it sees a certain pre-defined sequence of DTMF
> tones? Given the ubiquity of DTMF in the phone world and the need to
> control all kinds of things by DTMF tones, I would imagine there must
> be chips made just for that and it should be very easy to put together
> a simple circuit. Is that true? If yes, where can I find information
> abou that?
>
> I have seen kits from Vectronics or similar that do DTMF decoding but
> they also do a whole lot of other things (like waiting for the phone
> to ring for a preselected number of times before switching on etc)
> which I don't need. Also, these kits are in the >$50.- range which
> seems like overkill for a very simple thing.
>
> --Ernst KB3CEE
>

-- Check out the SSI 202/203 DTMF decoder you need 1 3.58Mhz xtal, 1
resistor, 1 cap and +5 volts to make it work.
dr.d
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1310. Re: Silver oxide?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <88kqlv$5dc$1@plutonium.btinternet.com>
Source record: 63265

K3FDY wrote
I have often heard that "silver-oxide" is as good, or almost as good, a conductor as the silver itself?
==========

Try changing the batteries in your hearing aid. ;o)

Reg.

1311. Litz Wire Source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: bkizerian@my-deja.com
Message-ID: <88mqs9$44k$1@nnrp1.deja.com>
Source record: 63266

Does anyone know a source--preferably surplus--where I can buy litz wire? I am particulary interested interested in a range between 15/44 to 25/44 served.

Thanks in advance

Bruce Kizerian

Sent via Deja.com http://www.deja.com/
Before you buy.

1312. Re: Richards Transformation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <38AEC58D.712410D9@mwci.net>
Source record: 63267

francine wrote:

> Anyone point me to a website, book, article, or sent me a copy, where
> the theory of above subject is described?
> I can't find it anywhere:-(

The Richards transformation has to do with positive real functions in network synthesis.

Reference "Modern Network Synthesis" by Van Valkenburg, Wiley 1960, p.173.

An article by Richards, "Resistor-transmission-line circuits" is in the Proc. I.R.E, 36, 217-220 (1948)

The Richards Transformation was used by Bott and Duffin in the synthesis of one-terminal RLC networks. See J. Applied Physics, 20, 816 (1949) and also the Van Valkenburg book. This book is available from on-line used book stores.

Bill W0IYH

1313. FS: 70 w. RF Finals Transisters AND others

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <88moelrju1@ns2.foothill.net>
Source record: 63268

I have 9 each of:
NTE317 new in unopened packages.
Here is what the package says on it:
NPN Si, RF,Pwr Output 70 W. 30 MHz.
Po - 220 W
Ic 15 A.
BVcbo - 36 V.
BVceo - 36 V. (CES)
BVebo - 4 V.
Hfe 10 Min.
W52N
Replaces ECG317, GE-281
$30.00 each plus $3.20 for shipping each total order.

2 each NTE235 new in sealed package.
NPN - Si, High Freq/Power Amp
Po 5W., 50MHz,
Replaces ECG235, GE-215, SK3197
$6.00 for the 2. plus $3.20 Priority mail, 1.00 First
class mail.

6 each NTE236 new in sealed package.
NPN - Si, Final RF Pwr Output.
(Po 13 W., 50 MHz, SSB)
Po - 25 W.
Ic - 8 A. pulse.
Ft - 100 Mhz
BVcbo - 70 V.
BVceo - 70 v. (CER)
BVebo 4 V.
hvf 20 Min.
$7.00 a pair plus $3.20 priority mail for total order,
or $1.00 regular mail

Eugene Rippern, 105 Donnington, Auburn, CA 95603.

1314. Re: Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: ka8sts@aol.com
Message-ID: <20000219144249.18844.00000474@ng-fm1.aol.com>
Source record: 63269

A variac in the primary line will work.or maybee youe transformer has different taps either on the primary winding or the secondary

coy KA8STS

1315. Siskin Cat Interface - Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-19 00:00:00 UTC
From: a f mason <gw0tkx@ic24.net>
Message-ID: <54Ur4.159$55.4767@news2-hme0>
Source record: 63270

Can anyone help me
I need a copy of the instructions for the Siskin Multi-cat interface.
I have obtained a non working one which I have repaired but I need the dip switch settings and the details of the pin-outs to make the lead from interface to radio (Yaesu 767GX)
I would appreciate any help or suggestions of where I could obtain a copy
Many thanks
de Alan GW0TKX

1316. Re: How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <88ndo2$g4l$1@nnrp1.deja.com>
Source record: 63271

In article <m2zosx4yb8.fsf@russell.mb.jhu.edu>,
niebur@russell.mb.jhu.edu (Prof. Ernst Niebur) wrote:
>
> Thanks to everybody who sent me info about chips made for DTMF
> decoding. This is just what I need! Looks like I won't be running out
> of projects :)
>
> --Ernst KB3CEE
>
Glad to help
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1317. Re: Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <WnSr4.3642$k66.289210@bgtnsc04-news.ops.worldnet.att.net>
Source record: 63272

Hi Lonnie,

How about a 15V bucking transformer in series with the primary of your
filament transformer.
A bucking transformer is wired with it's secondary in series with the pri.
of your filament transformer, but with the phase reversed. This will then
subtract 15V from your 120V line voltage, and reduce your 5.6V to 4.9V.
In case it's not clear you also need to apply 120V to the pri.of your
bucking
transformer. And make sure the bucking transformer sec. can handle the
pri. current of the filament transformer.
--
Mike Knowlton
Panama City Fl.

Lonnie (NT6B) <nt6b-vk7lm@dreamsoft.com> wrote in message
news:38AE3B9C.2ABDE1B1@dreamsoft.com...
> Hello...any help in this area would be appreciated. With 3-500Z
> tubes, 4.8 volts to 5.0 volts is desirable on the Filaments ...Mine in
> my 2K2 Henry are running about 5.6 volts each and I am looking for the
> right a way to reduce the voltage to the acceptable range.

1318. Re: Litz Wire Source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <88prq6ot1@nnrp1.deja.com>
Source record: 63273

In article <88mqs9$44k$1@nnrp1.deja.com>,
bkizerian@my-deja.com wrote:
> Does anyone know a source--preferably surplus--where I can buy litz
> wire? I am particulary interested interested in a range between 15/44
> to 25/44 served.
>
> Thanks in advance
>
> Bruce Kizerian
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.
>

(not surplus) http://www.wiretron.com/litz.html
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1319. FS: Drake 8kc 1st IF filter for R4C

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000220110630.00379.00000721@ng-fj1.aol.com>
Source record: 63274

$35 shipped.

73

Evan

1320. Cheap 572-B Amp. Tubes????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: uncrichie7@aol.com
Message-ID: <20000220131352.15391.00000608@ng-fn1.aol.com>
Source record: 63275

Hello fellow homebrew amateurs. I'm trying to find an inexpensive source for 4-572-B tubes. All the major sources are too expensive and E-Bay is getting out of hand also. Any suggestions on a supplier would be greatly appreciated. Thanks in advance. Send E-Mail to uncrichie7@aol.com Thanks, Kurt K3KL...

1321. cheap 2m rigs, was: How easy is it to homebrew DTMF decoder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: niebur@russell.mb.jhu.edu
Message-ID: <m23dqnbx1x.fsf_-_@russell.mb.jhu.edu>
Source record: 63276
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf

maddog@io.com writes:

> On 17 Feb 2000 11:25:50 -0500, niebur@russell.mb.jhu.edu (Prof. Ernst
> Niebur) wrote:
>
> > (one notable exception being
> >the Kenwood 261 but this seems otherwise to be a so-so rig, if one
> >believes the QST test).
>
> Of course, everything's relative, but for the price (<$200), the 261A
> is hard to beat.

Certainly, everything's relative.

Good mic, excellent audio and ALC circuit, reliable
> power (5-10-50 watts switchable). Tolerant of antenna problems and
> car voltages. It's a little fussy (i.e., un-intuitive) to program,
> but I've had mine in daily use for over a year and can't complain
> about anything. And, as you said, built-in DTMF (but decoder is
> optional).

My understanding is that DTMF encoder AND decoder is built-in. I
thought it was the CTCSS decoder that is optional.

What's a better mobile transceiver for a lower price?

I don't know of any. HOWEVER, my impression is that for relatively
little money more (and again, everything's relative :), there are
better rigs. The lowest price I have seen for the Kenwood 261 is
179.-. The ICOM 2100 can be had for 193.- at AES and, at least on
paper, it looks a lot nicer. For again a bit more (209.- @ AES), the
Yaesu 2600 looks like a much newer rig with many more options, more
sensitivity, less intermod, higher power etc. If you add $60.- for the
CTCSS decoder on the 261 (standard in both ICOM and Yaesu), the
Kenwood is actually the most expensive.

Of course, neither the Yaesu nor ICOM have DTMF decoding (not even
optional). And, admittedly, all my judgement is based on reading
reviews and specs, I have no first-hand experience at all. If anybody has
any additional information about these three rigs (ICOM 2100, Yaesu
2600 and Kenwood 261), perhaps even first-hand experience with more
than one of them, I would certainly love to hear about that. I am
about to order one Yaesu (which I think is the best of the three) for
one of my cars and one ICOM for the other (the Yaesu does not fit into
the dash of that car).

>
> 73,
> monty N5FC
>

73,

--Ernst KB3CEE

1322. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Frank Dinger <gm0csz.kn6wh@invertain.freeserve.co.uk>
Message-ID: <88pfg9ksc1@newsg2.svr.pol.co.uk>
Source record: 63277

> Only one necessary thing, install a fuse about the size of the Astron's
> capability in series with the battery(s). If the Astron's crowbar
> trips, the battery will try to feed back into it and cause a bit of a
> meltdown.
> Bob KU8C
==========
A sturdy diode will prevent the above problem . However if the Astron PSU is set at 13.8 V ,you will charge the batteries only to say 13.1 V since approx 0.7 V is lost across the diode. This can obviously be overcome by adjusting the Astron PSU to 14.4 - 14.5 V.

Depending on the battery or batteries being charged it might be useful to limit de charging current to a reasonably low level . This will extend the life of the battery/batteries (especially when sealed gel type batteries are involved) and is no problem in standby mode.

A simple way to limit the current is putting a 12 V car bulb between Astron and batteries. A 50 Watts bulb or 2 in parallel would do the trick . Suppose the battery has been drained to 11.5 V (this should be the lower limit) then charging through the bulbs will take place on the basis of just over 2 V drop. The bulb(s) also have a stabilising effect , when current increases the filament gets hotter ,its resistance increases ,which causes the current to decrease . The glowing intensity of the filament is a measure of charged state of the battery.

I run all radio equipment in the shack including desk lighting on deep cycle ,lead acid batteries (the type used in caravans ,motor homes etc) with an installed capacity of approx. 400 Ah , The current charger can only do 2 Amperes which ,considering my operating habits , at the moment is more than enough to keep the batteries healthy. Shortly also the PC will join via an inverter. The next step is a solar panel and perhaps a wind generator. Not because of necessity ,but out of interest in renewable energy.

73 Frank gm0csz.kn6wh@invertain.freeserve.co.uk

1323. Re: Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Frank Dinger <gm0csz.kn6wh@invertain.freeserve.co.uk>
Message-ID: <88pfghksc2@newsg2.svr.pol.co.uk>
Source record: 63278

Lonnie (NT6B) <nt6b-vk7lm@dreamsoft.com> wrote in message
news:38AE3B9C.2ABDE1B1@dreamsoft.com...
> Hello...any help in this area would be appreciated. With 3-500Z
> tubes, 4.8 volts to 5.0 volts is desirable on the Filaments ...Mine in
> my 2K2 Henry are running about 5.6 volts each and I am looking for the
> right a way to reduce the voltage to the acceptable range. The Henry
> Manual isn't much help...any suggestions on what to do and how to do
> it?...
==========
In QEX ,Jul/Aug 1999 there is an interesting article by Al Williams - VE6AXW
,on a regulated 2400V power supply , on the basis of thyristor control in
the primary winding of the HV transformer. HV Voltage swing during SSB or
CW operation is only 3 volts ..... at 2400 V HV. @ 1 kW load
The same principle could be applied for low voltage control ,eg for filament
voltage . You could even keep AC for the filament and only rectifiy a sample
voltage for sensing/control purposes.

Good Luck , Frank gm0csz.kn6wh@ukrs.org

1324. AirSCAN- Software for the BC895XLT.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: News <slyster7@mn.mediaone.net>
Message-ID: <clXr4.704$yT6.37190@typhoon.mn.mediaone.net>
Source record: 63279
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.scanner

Download the demo of AirSCAN, software for the BC895XLT and a few other scanners. AirSCAN is a very convenient package used for finding and labeling active frequencies (similar to a "bandscope"), counting hits in frequency ranges, saving and loading previous searches, managing your scanners banks, counting hits on your existing scanner banks, and using the new "extended banks" A-Z adding 2080 more channels for your scanner!

See Silver Software website.
http://people.mn.mediaone.net/slyster7

1325. Technical Q: Impedence Matching / Mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: nw7us@hfradio.removethispart.org
Message-ID: <BrZr4.1092$pK3.24607@sea-read.news.verio.net>
Source record: 63280
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

Howdy,

I have the IC-706 MK II G. It seems from the manual that the mic input is 600 ohms. Is this correct?

I want to use my Shure mic from the Kenwood TS-830S. (MC-50). It has High and Low (50 KOhms, and 500 Ohms) impedence. Now, my hope is that I can match, say, the 500 to the 600 with a transformer (I can wind it??). Or, is there something better I can do? The shure mic is flat, I think... would that be good on a MKIIG?

One of the reasons I wish to do this is that I have a boom mount so that I can have hands-free operation... I already created the conversion cable ... that works fine. Just the impedence mis-match causes the MC-50 to currently be way to weak for good operation.

Thanks!

73 de NW7US, Tomas

--
: http://accessnow.com -- Brinnon, Washington : 122.93W : 47.67N :
: HOME: http://hfradio.org and http://cw.hfradio.org :
: - :
: World-Wide Communications via Amateur Radio : CW/SSB DX Hound :
: 10x56526 : FISTS 7055 : Code Warrior #60 : Propagation Student :
: :
: Member, ARRL -- Official Webmaster of the North West ARRL Site :
: NWARRL - http://hfradio.org/nwarrl/ :

Get your FREE Ham Radio Website today, create online equidistant
azimuth maps, swap and shop, books, check propagation, read dx
news, and more. All at http://hfradio.org/ - SWL/HAM/Live!

"Cigars are like beautiful women - you fall in love with the
shape, and then you must work to keep the flame alive!"
-- Winston Churchill.

1326. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38b06106.178095397@news.azstarnet.com>
Source record: 63281

On Sun, 20 Feb 2000 21:38:23 GMT, rudder_NoCannedOffal@gulfcoast.net (M. J. Clark) wrote:

[snip]
>
>This is not needed. As long as the terminal voltage is not allowed to exceed
>the battery manufacturer's specification (and with a regulated supply that
>should be no problem), the battery current will be self limiting.
>
The question is what is the "terminal voltage"?

Battery charging is *much* more complicated than some of the ideas "floated" here.

See: http://www.statpower.com/tech4-2.htm and

http://www.amplepower.com/primer/index.html

for starters.

73,

Wes Stewart, N7WS

1327. FS: parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <88poib$rb9$1@SOLAIR2.EUnet.yu>
Source record: 63282
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1328. Re: .,,.ELECTION 2000 - JOHN McCAIN - THE ONLY CHOICE!!!.,,.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38b060f0.42603077@news.online.no>
Source record: 63283

On 20 Feb 2000 20:06:34 GMT, AvidMcCainSupporter@kshhdxnpmm.net wrote:

>
>Dini psdgno esm eauxik yjaexh cipfw
>pniadib rvqi rvr lqecy bk
>fql vos sj ydfr pej rmcsl?
>
it's rrah international newsgroup

1329. Re: Technical Q: Impedence Matching / Mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <38B0BF0F.6614@nbnet.nb.ca>
Source record: 63284
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

Howdy Tomas....Based solely on my experience, I wouldn't think that your problem is due to mismatch...(assume you are using the 500 ohm setup of that MC-50 of course). Impedance is only part of the requirement, with level being the other....output level of a particular cartridge, the directional characteristics of the microphone assembly and to a lesser degree the response curve of the mic can affect its use with a different transmitter.....the response curve will really affect the sound of it when SSB (suppressed carrier) mode is used. If that was my project, I'd want to monitor myself (or preferably someone else you know) using the combination to see if the response is acceptable...if it is, merely increase the mic level to suit - if its still not enough you may have to consider another cartridge OR an added preamp with just enough gain to restore good RF power output response to the audio input. Best of Luck!

73 - Gord VE1AJF

1330. Speaker Activity Detector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: ben@dubnospamwithmyheadman.wlokcorp.com
Message-ID: <38b07a5b.293080048@news.egl.net>
Source record: 63285

I'm trying to build a little circuit to have a light come on when a signal is received by a radio. I'm trying to do wither a relay-triggered or transister triggered event.

I want to use the speaker port, but my problem is that the speaker always has voltage across it, squelch regardless. Anyone who knows audio circuits knows about this problem. Can anyone think of a way to check "speaker activity" through the speaker port?

Any and all help appreciated.

1331. Wanted: SWL GM-20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38B07D25.8695B3C4@ica.net>
Source record: 63286
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Looking for a Small Wonder Labs Green Mountain 20 QRP rig in any form...Unbuilt kit, built and working or not working.

Please reply by e-mail: hduff@ica.net

1332. Re: How's the Ten-Tec 1210??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Bill Gallagher <KS3Y@prodigy.net>
Message-ID: <88q9iu$41gu$1@newssvr04-int.news.prodigy.com>
Source record: 63287
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Easy build...you'll want to re-rock it and tune it to use 26-30 as the IF.
The xtal is available from ten-tec...order it when you order the kit!

Bill wa3ra
"Jim Allen" <jmallen@altavista.net> wrote in message
news:88nvk7$2k4$1@nntp2.atl.mindspring.net...
> I'm considering putting together the TT 1210 transverter for use with a
> Uniden HR-2510. For those who've already done so, what do you think? I'm
> assuming the build requires a decent DMM and freq counter, as well as a
> fairly clean 2M rig for a sig generator (along with the usual kit-nuilding
> tools). Any other requirements? How well did it go together? Anybody
have
> luck using it with the Uniden? Haven't inhaled some serious rosin smoke
in
> some time, and I'm itching to do this build; but only if it results in a
> good addition to the shack.
>
> Reply on this NG or via email at kc7bdp@juno.com or jmallen@altavista.net
>
> Thanks & 73
> Jimmy, KC7BDP
>
>

1333. Re: How's the Ten-Tec 1210??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: Jim Allen <jmallen@altavista.net>
Message-ID: <88qad9$8ed$1@nntp3.atl.mindspring.net>
Source record: 63288
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Nice idea on the 118 MHz rock. Only one problem...the 11M noise is loud and dirty around here - or so I'm told, haven't spent much time on 11M since getting my ticket - the whole idea was to get away from the crud that 11M had degraded into. I'd be a bit concerned that one of these guys might be in the neighborhood, splattering into my IF rig. Of course, then again, our local OO (5 blocks away) fires up his Henry 3K Classic on 10M and wipes out my 6M on Field Days now. Lord knows what would pop up on a 28 MHz IF!

With the response I've gotten so far, will probably break down and order one tomorrow - unless I see something REALLY good in a 2M all-mode on the swap groups.

Thanks,
Jimmy KC7BDP

Bill Gallagher <KS3Y@prodigy.net> wrote in message
news:88q9iu$41gu$1@newssvr04-int.news.prodigy.com...
>
> Easy build...you'll want to re-rock it and tune it to use 26-30 as the IF.
> The xtal is available from ten-tec...order it when you order the kit!
>
> Bill wa3ra
> "Jim Allen" <jmallen@altavista.net> wrote in message
> news:88nvk7$2k4$1@nntp2.atl.mindspring.net...
> > I'm considering putting together the TT 1210 transverter for use with a
> > Uniden HR-2510. For those who've already done so, what do you think?
I'm
> > assuming the build requires a decent DMM and freq counter, as well as a
> > fairly clean 2M rig for a sig generator (along with the usual
kit-nuilding
> > tools). Any other requirements? How well did it go together? Anybody
> have
> > luck using it with the Uniden? Haven't inhaled some serious rosin smoke
> in
> > some time, and I'm itching to do this build; but only if it results in a
> > good addition to the shack.
> >
> > Reply on this NG or via email at kc7bdp@juno.com or
jmallen@altavista.net
> >
> > Thanks & 73
> > Jimmy, KC7BDP
> >
> >

>
>

1334. Re: WTB: 3 or 4 Signetics NE-561 obsolete PLL ships

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2002002312090001@dialup-1041.hip.cam.org>
Source record: 63289

In article <88hnjjlbe1@nntp9.atl.mindspring.net>, jeffbro@mindspring.com (Jeff Brown) wrote:

> Anybody got a few gathering dust in the parts bin?
>
> Thanks, Jeff
>
> jeffbro@mindspring.com

You might be more successful in getting results if you included more details.

Since it's an obsolete part, it's been around for about thirty years, there must be some reason why you want it. To keep an older piece of equipment going is a better reason than because you want to build some old project. In either case, there are workarounds, but it is easier to redesign when starting from scratch than when trying to retrofit something.

The NE561 is an analog phase locked loop, with an additional analog multiplier. The RC multivibrator VCO feeds directly to the phase detector, and the whole thing is rated at 15MHz minimum, and 30MHz typical.

What you are using it for, and the frequency range, would tend to determine how you could create a workaround. If it's just a straight PLL, without the extra analog multiplier being used, then any PLL that covers the needed frequency range would provide equivalent function.The CMOS 4046 is the most obvious choice, the Exclusive OR phase detector gives about the same effect as an the analog multiplier phase detector in the 561. Frequency is limited to the low MHz range, though the 74HC4046 will give you higher frequency coverage.

Any of the Signetics analog PLL's will give you the same basic PLL. The variations were function, such as some having a break between the VCO and the phase detector, or the added analog multiplier, and frequency range. If the 565 is still around, it always did seem more available, it would work, as long as you are using it below 500KHz.

TThe point is that once you get a suitable PLL, the extra analog multiplier that the 561 contains is relative easy to come by. The fairly common NE602 is the same basic circuit as used in the 561's analog multiplier (and phase detector for that matter). There are all kinds of ways to get an analog multiplier. In some cases, one might even be able to use CMOS transmission gates, like the 4066, as a digital equivalent of an analog multiplier.

Michael VE2BVW

1335. Re: DC power supply schematics wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <AD4s4.5232$84.584954@alfalfa.thegrid.net>
Source record: 63290

You can get schematics for astron power supplies from the factory. Also consider buying the whole circuit board from astron. You'll get a great supply for a reasonable price. I'd suggest getting a tranmsformer first, then matching the schematic to the capability of the transformer. Good luck! mark kc7ltv

Chris Ross wrote in message <38B081EB.5054469D@kc.rr.com>...
>I am looking to build a couple of nice power supplys to run my radios on
>and also for a bench supply for my workshop. I am looking for the
>following in one. A 0-14 vdc selectable output at 1-25 or 30 amps
>selectable amperage. Both voltage and amperage meters would be nice too.
>Can anyone point me in a direction to find a schematic to something
>similar to this? I am sure that I could manage to build a basic 25 or 30
>amp supply easily enough, but don't know how modify the design to get
>the selector pots and the meters working correctly.
>
>Thanks for all the help
>
>Chris
>KB0MLR
>
>
>
>
>--
>
>"One World, One Web, One Program" - Microsoft Promotional Ad
>"Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler
>
>

1336. Re: need 116 MHz oscillator schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-20 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <951046746.1061597663@news.indigo.ie>
Source record: 63291

"S57NTY" <josip.hrste@siol.net> wrote:
>Hy !
>
>This is my first post to this newsgroup. I have a little problem. My current
>project is 10 to 2 m transverter. I already made RTX part and now I would
>like to make LO. I already bought 116 MHz christal, but I don't have
>schematics yet. If you have one in electronic form or you can scan one
>please mail me to:
>josip.hrste@siol.net
>
>73 de S57NTY

http://www.qsl.net/ei9gq/vhf_conv.html

73, Ed. EI9GQ

--

Remove 'X' to reply.

1337. Re: Speaker Activity Detector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <88r7tr$tl3$1@nnrp1.deja.com>
Source record: 63145

In article <38b07a5b.293080048@news.egl.net>,
ben@dubnospamwithmyheadman.wlokcorp.com wrote:
> I'm trying to build a little circuit to have a light come on
> when a signal is received by a radio. I'm trying to do wither a
> relay-triggered or transister triggered event.
>
> I want to use the speaker port, but my problem is that the
> speaker always has voltage across it, squelch regardless. Anyone who
> knows audio circuits knows about this problem. Can anyone think of a
> way to check "speaker activity" through the speaker port?
>
> Any and all help appreciated.
>

Take the AC component from the speaker port (via a capacitor),
amplify/rectify it and trigger your light with the resulting DC. If the
AC (at the port) is zero, no final DC will be got.
You can filter the original AC before rectifying it to avoid high
frequency noise to be detected.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1338. Re: Technical Q: Impedence Matching / Mic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Q57s4.8963$Pa1.164883@news6.giganews.com>
Source record: 63146
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

There is no significant difference between a 500 Ohm and a 600 Ohm impedance microphone. Just connect it and it should work.

73, Bob K6DDX

1339. FS: parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <88r701eeg1@SOLAIR2.EUnet.yu>
Source record: 63147
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1340. Need DX-302 junker or M54826P chip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: robertc908@aol.com
Message-ID: <20000221073412.08495.00000050@ng-cm1.aol.com>
Source record: 63148

I am in need of a junk DX-302 that has a good M54826P frequency counter chip.
If you have the chip or know the source of the M54826P chip please e-mail.
Radio Shack no longer carries this part.
73's
Bob, W4RLC (formerly WA7OGU)

1341. Re: Need a shematic for a 12 dc power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: gervais <gfillio1@globetrotter.qc.ca>
Message-ID: <a0fs4.3254$H07.84599@news.globetrotter.net>
Source record: 63149

Suplement to my request:
it is a Hammond Transformer baught some years ago.
it is a CT center tap .
it is a 10 amperes transformer

i whish to use it for a power supply for my radio needs

thanks for your help

Gervais
ve2ckn

"Al, N2NKB" <n2nkb@n2nkb@postoffice.worldnet.att.net> a crit dans le message news: TAGr4.3570$tk7.318005@bgtnsc05-news.ops.worldnet.att.net...
>
> gervais wrote in message ...
> >Hi all,
> >i have here an Transformer Type h ,cat no :165s12 from HAMMOND
> >and some capacitor 3.750 mfd 75vdc and i need a hematic diagramm to built a
> >power supply for my equipment ,does anyone have an idea whare i can find
> >it???
> >
> >any help will be appreciated!
> >
> >gervais
> >ve2ckn@rac.ca
>
>
> You might do better from this newsgroup if you detail the transformer's output voltages, and its configuration.
> Most power supplies use transformers with centertap secondary windings followed by 2 rectifiers, others use only
> one winding followed by a bridge consisting of 4 rectifiers.
> After the rectifiers comes the filter caps, which is typically much more than 3.7 uF. Try 1,000 uF.
> Then comes the regulator, given that the current ratings are compatible, go for a simple 3 terminal
> regulator.
> Al
>
>

1342. FA On Ebay: 4 Hammarlund Variable Capacitors - Panel Mount

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: alg460@aol.com
Message-ID: <20000221164935.07430.00000981@ng-fz1.aol.com>
Source record: 63150

FA On Ebay: 4 Hammarlund Variable Capacitors - Panel Mount
Three 100pF and one 50pF

For description and pic see:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=265577397

1343. Compactron adaptor, Hickok part # 1704 wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000221172315.22805.00001890@ng-de1.aol.com>
Source record: 63151

Hello group, has anyone the compactron Adaptor, Hickok part # 1704 or an equivalent that they can part with reasonably ?

Please respond privately if available.

It would be nice to test compactrons for gM with one of the TV-7's here.

BTW, got the tip for this off of the following page.

If you run a TV-7, check it out.

http://www.geocities.com/SiliconValley/6992/tv7.htm

Regards,
Joe Pratt, Tubecntral@aol.com

1344. Re: Litz Wire Source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38B1B6DC.C2AE0A10@valley.net>
Source record: 63152

bkizerian@my-deja.com wrote:

> Does anyone know a source--preferably surplus--where I can buy litz
> wire? I am particulary interested interested in a range between 15/44
> to 25/44 served.

Hello--

IIRC, Surplus Sales of Nebraska had large rolls FS a couple of years ago.
Try a web
search for the company.

73,
Brad AA1IP

1345. Re: Speaker Activity Detector?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38b172f2.112759749@news.online.no>
Source record: 63153

On Mon, 21 Feb 2000 11:35:22 GMT, py1ll@my-deja.com wrote:

>In article <38b07a5b.293080048@news.egl.net>,
> ben@dubnospamwithmyheadman.wlokcorp.com wrote:
>> I'm trying to build a little circuit to have a light come on
>> when a signal is received by a radio. I'm trying to do wither a
>> relay-triggered or transister triggered event.
>>
>> I want to use the speaker port, but my problem is that the
>> speaker always has voltage across it, squelch regardless. Anyone who
>> knows audio circuits knows about this problem. Can anyone think of a
>> way to check "speaker activity" through the speaker port?
>>
>> Any and all help appreciated.
>>
>
>Take the AC component from the speaker port (via a capacitor),
>amplify/rectify it and trigger your light with the resulting DC. If the
>AC (at the port) is zero, no final DC will be got.
>You can filter the original AC before rectifying it to avoid high
>frequency noise to be detected.
>--
>Greetings,
>
>Luiz - PY1LL

inductive coupling to a speaker shouldn't be too difficult, some turns
in front of it.....and it is galvanical isolated

1346. Re: Have you linked to My Site? Address change.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: andrewd@nospam.ozemail.com.au
Message-ID: <38b1c6f7.1406057@news.ozemail.com.au>
Source record: 63154
Cross-posted to: aus.radio.amateur.misc,aus.radio.amateur.wicen,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Sun, 20 Feb 2000 14:11:07 +1000, "Adam" <jabbaSPAMJAM@w3.to> wrote:

>Hi
>
>If you know of any other sites that have linked to me please feel free to
>forward this e-mail to them... it would help me greatly and reduce dead
>links

This method is not too reliable. You need a method of locating all
sites pointing to yours, right? So - do a search using altavista,
for sites with links to yours.

The syntax for the link search is all on the Altavista advanced help.

Basically you search for link:blah.com.au/jabba
or whatever your site is.

This way you will find all sites linking to yours (within the currency
errors of Altavista) and you can compile an email list while you're at
it. Then when you next move your site, you can just email those
webmasters and request the change direct.

You will find other very useful facilities on the advanced help of
most search engines. The other one I use often is to limit the domain
range to sites in .au or .com. This does mean you won't find
Australian sites hosted at a non AU domain.

Andrew
VK1DA

Andrew Davis, IT and Business Systems Consultant -- Canberra, Australia
AdvantEdge Business Solutions Pty Ltd http://www.AdvantEdge.com.au
Andrew's Web Hub: http://www.ozemail.com.au/~andrewd/
Associate - Australasian Web Publishers Association www.awpa.asn.au

1347. FS: parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <88sj47$41k$2@SOLAIR2.EUnet.yu>
Source record: 63155
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1348. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <88skf1liv1@newcastle.cs.ubc.ca>
Source record: 63156

rudder_NoCannedOffal@gulfcoast.net (M. J. Clark) writes:

>I'm afraid I don't see your point. Are you saying that current regulation IS
>needed in addition to voltage regulation?

At least some sealed lead acid batteries do require current limiting during the initial charge, particularly if your initial voltage limit is set to 14.5 V or so for fast charging. I've seen one battery data sheet that specifies a charge current maximum that's 25% of the battery capacity (i.e. 0.25 C rate - 2.5 A for a 10 Ah battery). I've seen another manufacturer specify 0.4 C maximum.

In both cases, they recommend charging at constant current until the voltage rises to a particular limit, then maintaining that constant voltage as the charge current tapers. The voltage limit is set to about 14.5 V for fastest recharge, but in that case you can't leave the battery connected to the charger forever. A voltage limit of 13.8 V recharges more slowly, but is safe for indefinite "float" charging.

A 3-stage charger may current limit at first, then provide constant voltage of 14.5 V or so until the current drops sufficiently, then drop back to a constant voltage of 13.65 V or so for float - this gives fastest safe charge and safe float charging in the same unit. I've built a charger for small SLA cells using a commercial charger chip, and this is exactly how it works (and it does have settable current limit!).

Then there's Sonnenschein, who specifies just using 13.8 V with no current limit. They claim their battery self-limits the current to a safe value. They also don't recommend using 14.5 V for faster charging - just 13.6 to 13.8 V period.

Dave

1349. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38B211AD.7787D75A@eznec.com>
Source record: 63157

Panasonic sealed lead-acid batteries are specified to charge at 14.5 - 14.9 volts for cycle use, 13.6 - 13.8 volts for standby use. They also specify a maximum charge current of 0.4 C (for example, 400 mA for a 1 Ah battery). Yuasa batteries have similar specs.

These are liquid, not gelled, electrolyte batteries, but amateurs seem to call all sealed lead-acid batteries "gel cells" regardless. Gates sealed lead-acid cells use a starved electrolyte system. They're specified as 14.6 - 15.0 volts for a six-cell ("12 volt") battery for cyclic use, and don't have a maximum charge current spec. I wouldn't be surprised if gelled-electrolyte batteries have different specs yet. If you want your battery to last, you should check the manufacturer's specs for your particular battery. A lot of them are available on the web.

Roy Lewallen, W7EL

"M. J. Clark" wrote:
>
> davem@cs.ubc.ca (Dave Martindale) wrote in
> <88skf1liv1@newcastle.cs.ubc.ca>:
>
> [Snip]
>
> >Then there's Sonnenschein, who specifies just using 13.8 V with no
> >current limit. They claim their battery self-limits the current
> >to a safe value. They also don't recommend using 14.5 V for faster
> >charging - just 13.6 to 13.8 V period.
>
> 14.5 volts is unsafe for any gel cell that I have come across. The usual
> maximum voltage is specified at around 14.1 to 14.2 volts (temperature
> dependent). I have seen several rather expensive gel cells destroyed by
> charging at 14.4 volts for extended periods.
>
> One of my two 4D's gel's was made by Sonnenschein. I have had it a long
> time, and it has always been charged to 14.1 volts, then floated to 13.6
> volts. The literature that came with specifically stated a maximum terminal
> voltage in the very low 14's.
>
> In any event, for any reasonable amateur application using a reasonably sized
> suitable lead acid battery (preferably deep cycle) floated across a station
> power supply (with isolation diode), there is no need to current limit as was
> suggested early in the thread.
>
> --
>

> Regards,
> Malcolm, WX4YZ
>
> (To reply via email, remove all between rudder and @)

1350. DC power supply schematics wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: Chris Ross <pragmatist@kc.rr.com>
Message-ID: <38B081EB.5054469D@kc.rr.com>
Source record: 63292

I am looking to build a couple of nice power supplys to run my radios on and also for a bench supply for my workshop. I am looking for the following in one. A 0-14 vdc selectable output at 1-25 or 30 amps selectable amperage. Both voltage and amperage meters would be nice too. Can anyone point me in a direction to find a schematic to something similar to this? I am sure that I could manage to build a basic 25 or 30 amp supply easily enough, but don't know how modify the design to get the selector pots and the meters working correctly.

Thanks for all the help

Chris
KB0MLR

--

"One World, One Web, One Program" - Microsoft Promotional Ad
"Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

1351. Re: DC power supply schematics wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: Chris Ross <pragmatist@kc.rr.com>
Message-ID: <38B08248.8F52A76A@kc.rr.com>
Source record: 63293

I forgot to add that the input would be 120vac. Sometimes we forget that
this is a world-wide audience....

Chris Ross wrote:

> I am looking to build a couple of nice power supplys to run my radios on
> and also for a bench supply for my workshop. I am looking for the
> following in one. A 0-14 vdc selectable output at 1-25 or 30 amps
> selectable amperage. Both voltage and amperage meters would be nice too.
> Can anyone point me in a direction to find a schematic to something
> similar to this? I am sure that I could manage to build a basic 25 or 30
> amp supply easily enough, but don't know how modify the design to get
> the selector pots and the meters working correctly.
>
> Thanks for all the help
>
> Chris
> KB0MLR
>
> --
>
> "One World, One Web, One Program" - Microsoft Promotional Ad
> "Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

--

"One World, One Web, One Program" - Microsoft Promotional Ad
"Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

1352. Re: DC power supply schematics wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-21 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38B08C39.4A4DF6A0@cmcorp.com>
Source record: 63294

Chris Ross wrote:

> I am looking to build a couple of nice power supplys to run my radios on
> and also for a bench supply for my workshop. I am looking for the
> following in one. A 0-14 vdc selectable output at 1-25 or 30 amps
> selectable amperage. Both voltage and amperage meters would be nice too.

Do you REALLY need voltages down to ZERO???
I can see starting at say... 1.25 volts or so, but ZERO?

>
> Can anyone point me in a direction to find a schematic to something
> similar to this? I am sure that I could manage to build a basic 25 or 30
> amp supply easily enough, but don't know how modify the design to get
> the selector pots and the meters working correctly.

There are several options...

I'd use a LM317K and PNP Power transistors.
Meters are trivial.

> Thanks for all the help

E-Mail me for a schematic.

What Transformer (Voltage/current) have you?

> Chris
> KB0MLR
>
> --
>
> "One World, One Web, One Program" - Microsoft Promotional Ad
> "Ein Volk, Ein Reich, Ein Fuhrer" - Adolf Hitler

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1353. FS: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: VHF <walkie-talkie@europe.com>
Message-ID: <88sl36bpl1@SOLAIR2.EUnet.yu>
Source record: 63158
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Make an offer.

http://www.geocities.com/FashionAvenue/Runway/7439/f117.jpg

1354. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: rudder_NoCannedOffal@gulfcoast.net
Message-ID: <8EE1E0250zzz@209.26.110.131>
Source record: 63159

davem@cs.ubc.ca (Dave Martindale) wrote in
<88skf1liv1@newcastle.cs.ubc.ca>:

[Snip]

>Then there's Sonnenschein, who specifies just using 13.8 V with no
>current limit. They claim their battery self-limits the current
>to a safe value. They also don't recommend using 14.5 V for faster
>charging - just 13.6 to 13.8 V period.

14.5 volts is unsafe for any gel cell that I have come across. The usual maximum voltage is specified at around 14.1 to 14.2 volts (temperature dependent). I have seen several rather expensive gel cells destroyed by charging at 14.4 volts for extended periods.

One of my two 4D's gel's was made by Sonnenschein. I have had it a long time, and it has always been charged to 14.1 volts, then floated to 13.6 volts. The literature that came with specifically stated a maximum terminal voltage in the very low 14's.

In any event, for any reasonable amateur application using a reasonably sized suitable lead acid battery (preferably deep cycle) floated across a station power supply (with isolation diode), there is no need to current limit as was suggested early in the thread.

--

Regards,
Malcolm, WX4YZ

(To reply via email, remove all between rudder and @)

1355. HF Resources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: nw7us@hfradio.removethispart.org
Message-ID: <39us4.1202$pK3.27134@sea-read.news.verio.net>
Source record: 63160
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

School Round Up went well. The students at Brionnon (Washington) School (5th and 6th graders) really enjoyed their first on-air experiences. We made some very excellent contacts. See some pictures at http://hfradio.org

A reminder:

http://cw.hfradio.org - CW / Morse Code Resource center. Lots of stuff coming down the line. If you have stories, tips, links, and other things, would you share them with me, and allow me to post them on this new resource?

As usual, you are also invited to visit http://hfradio.org - a non-commercial site offering:

+ Azimuth Map / Equidistant Map Creation (choose any QTH as center, many options)

+ Propagational Resources (live, real-time reports, eAlert service (sign up for automatic email solar/geo reports, complete with Aurora index))

+ News, and DX information and reports

+ QSL Manager and Callsign Lookup center

+ Swap and Shop

+ FREE HOME PAGES THAT YOU CAN USE TO POST YOUR OWN HAM OR SWL SITE

+ Bookstore - SWL and Ham related books. Over a 1000 titles so far.

+ Plus more (Directories, etc.)

73 de NW7US, Tomas

--
: http://accessnow.com -- Brinnon, Washington : 122.93W : 47.67N :
: HOME: http://hfradio.org and http://cw.hfradio.org :
: - :
: World-Wide Communications via Amateur Radio : CW/SSB DX Hound :
: 10x56526 : FISTS 7055 : Code Warrior #60 : Propagation Student :
: :
: Member, ARRL -- Official Webmaster of the North West ARRL Site :
: NWARRL - http://hfradio.org/nwarrl/ :

1356. info abt SMPS needed..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: nh7t@qsl.net
Message-ID: <38B27A26.87370B03@qsl.net>
Source record: 63161

hi all,
I have to build a 50V/20A switching power supply. Although I already gathered some Apps, I would like to hear from you if you have experiences abt what parts to take (price, availability). I want to run push - pull with fet's. The transistors are no problem, still looking for the driving device and the transformer core. Is there any site in the web describing such a project?
tnx a lot!
Rico

1357. What are they?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Tom Walker <ochonospam@ix.netcom.com>
Message-ID: <38B2AE9F.D5EC5C5B@ix.netcom.com>
Source record: 63162

Hello,

I have two old military surplus radios marked "radio receiver and transmitter BC-659-J" There is a number below that that reads "781 CQC 23121 phila 44-01." They appear to be two channel units and use tubes. It looks like they mount on a vehicle or possibly another piece of equipment like maybe a battery pack since all the tubes are all 1xxx. I've had these for 15 years plus and never been able to find the answer. Anybody know what they are? Could you point me somewhere?

Thanks

Tom

remove nospam from address to reply by e-mail

1358. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: rudder_NoCannedOffal@gulfcoast.net
Message-ID: <8EE279BD9zzz@209.26.110.226>
Source record: 63163

w7el@eznec.com (Roy Lewallen) wrote in <38B211AD.7787D75A@eznec.com>:

>Panasonic sealed lead-acid batteries are specified to charge at 14.5 -
>14.9 volts for cycle use, 13.6 - 13.8 volts for standby use. They also
>specify a maximum charge current of 0.4 C (for example, 400 mA for a 1
>Ah battery). Yuasa batteries have similar specs.

Roy, the thread originator was asking about car batteries, which at least implies that he was considering something with a capacity that would be reasonable for fixed station use. A 1Ah battery might be a tad small <g>.

It has been my experience that when lead acid battery manufacturers talk in terms of 0.XC, they are really refering to charger capacity, not to current limited charging.

>
>These are liquid, not gelled, electrolyte batteries, but amateurs seem
>to call all sealed lead-acid batteries "gel cells" regardless.

Well perhaps, but I have never run into that. Anyone who ever had to price (or pay for) large capacity gels will certainly know the difference.

>Gates sealed lead-acid cells use a starved electrolyte system. They're
>specified as 14.6 - 15.0 volts for a six-cell ("12 volt") battery for
>cyclic use, and don't have a maximum charge current spec. I wouldn't be
>surprised if gelled-electrolyte batteries have different specs yet.

They absolutely are different. Gel cells charged to 14.6 - 15.0 volts will almost certainly be damaged. The absolute maximum voltage for gels is normally spec'd at 14.1 to 14.2 volts.

>If you want your battery to last, you should check the manufacturer's specs
>for your particular battery. A lot of them are available on the web.

Right, whether flooded cell, starved electrolyte, gel, or other lead acid technology is used, it is imperative that the charging system be adjusted properly. Different battery technologies require different charging techniques and voltages.

--
Regards,
Malcolm, WX4YZ

(To reply via email, remove all between rudder and @)

1359. simple break-in TR relay circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <38b27054.560106@news.u-net.com>
Source record: 63164

I have just built a simple little 500milliwatt 20m QRP tx and am now looking to add a simple transistor switching break-in circuit to enable me to use it with a separate receive r. Can anyone point me in the direction of a simple circuit that might work to do this?

Larry MW0AWC

1360. Re: Help..Henry 2K2 Filament voltage

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38B2E50A.23B5@ixpres.com>
Source record: 63165

Lonnie OM,

See Richard Measures' web page. He has addressed many of the design shortomings (and there are several) in the Henry, Drake, Kenwood amps. High filament voltage is one of them. I have found him to be very helpful.
See: http://www.vcnet.com/measures/

73 and GL,

Don, W6JL

> Lonnie (NT6B) wrote:

> Hello...any help in this area would be appreciated. With 3-500Z
> tubes, 4.8 volts to 5.0 volts is desirable on the Filaments ...Mine in
> my 2K2 Henry are running about 5.6 volts each and I am looking for the
> right a way to reduce the voltage to the acceptable range. The Henry
> Manual isn't much help...any suggestions on what to do and how to do
> it?...
>
> 73's.....Lonnie (NT6B)

1361. Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <88uuscirk1@nnrp1.deja.com>
Source record: 63166
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Here's some weird ramblings I've posted on my site:

ENERGY-SUCKING ANTENNAS (electrically small resonators)
http://www.amasci.com/tesla/tesceive.html

MORE MUSINGS ABOUT ENERGY-SUCKING ANTENNAS
http://www.amasci.com/tesla/tescv2.html

Briefly: if an atom is 0.1 nanometer across, how can it
intercept light waves which have 500 nanometer wavelengths?
As an "antenna", an atom is far too small!

Answer: the atom resonates electrically, which creates a
strong synchronous AC field in its nearfield region. The local
e-field and b-field of the atom superposes with the fields of
the incoming EM waves, which causes the waves to bend towards
the atom. If we plot the Poynting vector field, we find that
the atom "sucks in" the energy like a miniature black hole.
As the waves march along, the phase of the atom's fields stay in
step, and the Poynting vector keeps pointing in towards the
atom. This works even though the atom is extremely small compared
to the wavelength, since the fields of the nearfield region *ARE*
the antenna.

The same thing occurs with conventional radio waves and
electrically small dipole antennas if a large AC voltage is
impressed upon the antenna. The same thing occurs with small
loop antennas if they are given a large current. Actively
resonating antennas draw in far more energy than passive
pickup coils. In theory, a tiny loop antenna can behave as if it
were electrically enormous, and can reach out and intercept
huge amounts of energy. At VLF frequencies, this effect
is significant. Nikola Tesla could have used this effect as part
of his "wireless power" scheme. It explains how even a tiny
antenna could intercept significant VLF wattage.

And you thought "crossed-field antennas" were weird! What about
the loopstick inside an AM receiver?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1362. Re: simple break-in TR relay circuit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38B30A40.90296E0A@eznec.com>
Source record: 63167

A lot of QRP rigs use this scheme:

From the tranmitter output transistor collector, put a small series capacitor (around 27 pF or so). At the other side of the capacitor, put two 1N914-type diodes to ground in parallel, one facing each way. (That is, ground the cathode of one diode and the anode of the other.) From this junction of the capacitor and two diodes, add a series inductor which resonates with the capacitor. (This is about 30 uH for a 27 pF capacitor.) The inductor value isn't very critical, and the inductor doesn't have to be good quality; a molded unit is good enough. The other end of the inductor goes to the receiver. You can omit the inductor if the signal to the receiver is strong enough without it. (The way to test is to disconnect the antenna. If the noise level drops, the receiver is getting enough signal, and more won't help.)

I first came across the capacitor-diode scheme in Hayward and DeMaw's _Solid State Design for the Radio Amateur_, and added the inductor to increase the signal to the receiver.

Roy Lewallen, W7EL

Larry Gagnon wrote:
>
> I have just built a simple little 500milliwatt 20m QRP tx and am now
> looking to add a simple transistor switching break-in circuit to
> enable me to use it with a separate receive r. Can anyone point me in
> the direction of a simple circuit that might work to do this?
>
> Larry MW0AWC

1363. Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Robert Fanfant <fanfant@ix.netcom.com>
Message-ID: <88v3s9$qi9@news.dns.microsoft.com>
Source record: 63168

What would the inductance value be of 14 turns(tightly wound) 26 gauge solid wire with an air core whose inside diameter is 1/8 of an inch.

Thanks in advance,

-rob

1364. Re: What are they?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-22 00:00:00 UTC
From: Tom Walker <ochonospam@ix.netcom.com>
Message-ID: <38B35B35.CC51D89B@ix.netcom.com>
Source record: 63169

Thank You for solving the mystery

Tom

spyder wrote:

> There is a short description of the equipment here.
>
> http://www.telalink.net/~badger/millist/m7.html#a1312
>
> Tom Walker wrote:
>
> > Hello,
> >
> > I have two old military surplus radios marked "radio receiver and
> > transmitter BC-659-J" There is a number below that that reads "781 CQC
> > 23121 phila 44-01." They appear to be two channel units and use tubes.
> > It looks like they mount on a vehicle or possibly another piece of
> > equipment like maybe a battery pack since all the tubes are all 1xxx.
> > I've had these for 15 years plus and never been able to find the answer.
> > Anybody know what they are? Could you point me somewhere?
> >
> > Thanks
> >
> > Tom
> >
> > remove nospam from address to reply by e-mail
>
> --
> --
> Click here for Free Video!!
> http://www.gohip.com/freevideo/

1365. Re: What are they?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: spyder <spyder@flash.net>
Message-ID: <38B31535.C2320BF9@flash.net>
Source record: 63170

There is a short description of the equipment here.

http://www.telalink.net/~badger/millist/m7.html#a1312

Tom Walker wrote:

> Hello,
>
> I have two old military surplus radios marked "radio receiver and
> transmitter BC-659-J" There is a number below that that reads "781 CQC
> 23121 phila 44-01." They appear to be two channel units and use tubes.
> It looks like they mount on a vehicle or possibly another piece of
> equipment like maybe a battery pack since all the tubes are all 1xxx.
> I've had these for 15 years plus and never been able to find the answer.
> Anybody know what they are? Could you point me somewhere?
>
> Thanks
>
> Tom
>
> remove nospam from address to reply by e-mail

--

Click here for Free Video!!
http://www.gohip.com/freevideo/

1366. Oprah, Nightline, Maria Shriver, 48 Hours, 20/20, Playboy, Kiplingers and more have all interviewed this famous Private Investigator. Now, you too can make substantial income using his highly sought- after SECRETS.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: BrianOShay@aol.COM
Message-ID: <200002230707.XAA14027@mailbox2.ucsd.edu>
Source record: 63171

Thank you for your interest in our training Course! We offer the most extensive training course in "How to Collect Judicial Judgments" available!!! In fact, we created this industry.

If you are like many people, you are not even sure what a Judicial Judgment is and why processing Judicial Judgments can earn you very substantial income.
When one person or business files suit against another person or business and wins, then winner than has a Judicial Judgment. You are happy you won, but you will soon find out the shocking
fact: "Its now up to you to Collect on the Judgment". The court does not require the loser to
pay you. The court will not even help you. In fact, employees of the court are forbidden by law from
telling you how to collect the judgment. Basically, the winner has a piece of paper. You must trace the loser down, find their assets; their employment, bank accounts, real estate, stocks and
bonds, etc. The nations most recognized private investigator will teach how to do it all!

Very few people know how to find these assets or what to do when they are found. The result is that millions of Judgments are just sitting in files and being forgotten. This is entirely
non-
confrontational and requires no special licensing.

Right now in the United States there is between 200 and 300 billion dollars of uncollected Judicial Judgments. For every Judgment that is paid, 5 or more Judgments take its place.

The income potential is substantial in this profession. Using the techniques taught in this course, people are now working full-time making $96,000.00 to over $200,000.00 per year, Part-time
associates are earning between $24,000.00 and $100,000.00 per year. Most choose to
work out of their homes, other build sizable organizations.

Today, people trained in this business opportunity are processing over 500 million dollars in
Judicial Judgments.

So, if you've ever dreamed of the financial freedom that owning your own business can provide. Dreamed of an early retirement, this may be the opportunity for you. None of your days will be dull.
You will be mentally challenged. This business protects you from corporate downsizing. This business is your ticket to freedom from others telling you what to do. This business lets you

control
your destiny! Our training has made this happen for many others already, Make it happen for you!

If the above sounds interesting to you then its time for you to talk to a real live human being,
no cost or obligation on your part.

Please call us at 1-303-423-9190, between the hours of 1:00pm - 6:00pm Mountain Time
(our mornings are reserved for support of our associates), Monday -friday.
Thank you for your time and interest.

1367. Wanted 10m FM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Jim <nj3t@surfshop.net>
Message-ID: <sb70mfkgr2a146@corp.supernews.com>
Source record: 63172

Hi,
Name is Jim and I am looking for a 10 meter FM transceiver. A kit or a converted CB.
Do you have a kit that you started but never finished or never got it working ? I may be interested in it.
Any old Heil conversion kits ?
--
de NJ3T "Jim"
email= nj3t@surfshop.net
packet mail= NJ3T @ K3SMT.#SWPA.PA.USA.NOAM

1368. ** BC895XLT software! Download demo now!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: News <slyster7@mn.mediaone.net>
Message-ID: <KIMs4.971$yT6.46821@typhoon.mn.mediaone.net>
Source record: 63173
Cross-posted to: rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,rec.radio.scanner

Download the demo of AirSCAN, software for the BC895XLT and a few other scanners. AirSCAN is a very convenient package used for finding and labeling active frequencies (similar to a "bandscope"), counting hits in frequency ranges, saving and loading previous searches, managing your scanners banks, counting hits on your existing scanner banks, and using the new "extended banks" A-Z adding 2080 more channels for your scanner!

See Silver Software website.
http://people.mn.mediaone.net/slyster7

1369. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Ed Price <edprice@pacbell.net>
Message-ID: <38B3A23E.4388@pacbell.net>
Source record: 63174
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:
>
> Here's some weird ramblings I've posted on my site:
>
> ENERGY-SUCKING ANTENNAS (electrically small resonators)
> http://www.amasci.com/tesla/tesceive.html
>
> MORE MUSINGS ABOUT ENERGY-SUCKING ANTENNAS
> http://www.amasci.com/tesla/tescv2.html
>
> Briefly: if an atom is 0.1 nanometer across, how can it
> intercept light waves which have 500 nanometer wavelengths?
> As an "antenna", an atom is far too small!
>
> Answer: the atom resonates electrically, which creates a
> strong synchronous AC field in its nearfield region. The local
> e-field and b-field of the atom superposes with the fields of
> the incoming EM waves, which causes the waves to bend towards
> the atom. If we plot the Poynting vector field, we find that
> the atom "sucks in" the energy like a miniature black hole.
> As the waves march along, the phase of the atom's fields stay in
> step, and the Poynting vector keeps pointing in towards the
> atom. This works even though the atom is extremely small compared
> to the wavelength, since the fields of the nearfield region *ARE*
> the antenna.
>
> The same thing occurs with conventional radio waves and
> electrically small dipole antennas if a large AC voltage is
> impressed upon the antenna. The same thing occurs with small
> loop antennas if they are given a large current. Actively
> resonating antennas draw in far more energy than passive
> pickup coils. In theory, a tiny loop antenna can behave as if it
> were electrically enormous, and can reach out and intercept
> huge amounts of energy. At VLF frequencies, this effect
> is significant. Nikola Tesla could have used this effect as part
> of his "wireless power" scheme. It explains how even a tiny
> antenna could intercept significant VLF wattage.
>
> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))

> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

Bill:

So what limits the energy "sucked up" by the ferrite rod antenna in that AM radio? I don't think I ever heard of a loopstick melting right out of one of those cheap plastic radios.

Also, specifically which "theory" are you referring to when stating that a small loop antenna can be "electrically enormous"?

Ed

1370. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38B3BFE3.61FA556E@webaxs.net>
Source record: 63175
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

At last, someone has stated what i figured 10 years ago!

If the losses in a ferrite rod antenna are made very low,
the currents will become much higher, limited only by the
radiation resistance which is very low for around 1MHz.
The selectivity will also become sharper.

Science Hobbyist wrote:
>
> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

1371. Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38b3bae4.4966593@news.erols.com>
Source record: 63176

I was tinkering with my version of Doug DeMaw's Barebones Superhet Receiver (20 meters, single conversion superhet using mostly 40673 dual gate MOSFETs, 3 crystal ladder filter using 3.359 color burst rocks). I wanted to be able to listen to SSB signals but the crystal filter was too narrow. Not wanting to go to the trouble of building a proper 2-3 kc wide filter for the phone signals, I decided to come up with an arrangement to just "switch out" the crystal filter.

I used two switching diodes controlled from the front panel. When the switch is thrown the diodes are turned on and, in effect, a jumper wire goes from the output of the LC tuned circuit at the input of the filter to the input of the LC tuned circuit at the output of the filter. IF selectiivity is then limited to that provided by the two LC tuned circuits.

I found that with the insertion loss of the crystal filter thus eliminated, I was getting too much IF gain, so instead of just switching in the jumper wire, I now switch in a 10K pot that I can adjust to keep the gain roughly equal to that that I get with the filter switched in.

This is a very easy way of being able to use those very narrow CW receivers for casual phone band monitoring. This morning I fired up the receiver and was able to listen to some VKs involved in a very pleasant discussion of the southern aurora!

73 Bill N2CQR
http://www.erols.com/wmeara

1372. Need Help w/mike ckt for Icom 735

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Norman Owens <kq6td@atlantic.net>
Message-ID: <X6Rs4.614$475.119484@news1.atlantic.net>
Source record: 63177
Cross-posted to: alt.ham-radio.marketplace,rec.boats.electronics,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Somehow I have misplaced my Microphone for my Icom 735 while we moved from one boat to a another. I have a non Icom mike and wonder if it will work on my radio and how to hook it up. I have the 8 pin plug. The mike I have is marked GE Communications on the front, and on the back is 344A4528P55 Rev B, Assembled in Mexico.

It has 5 wires and I assumed Black is ground or common, so

Blk to red= open and then "0" with PTT
Blk to Grn= open and then 2 meg with PTT
Blk to wht= acts like cap is charging I stopped at 22 meg. PTT no effect.
Blk to Blue= 4.5mg, PTT no effect

Can I use this mike and how would I hook it up to the plug. Please give how I should look at the plug, front or back.

Thanks Norm

1373. FA ANTENNA TUNERS & PARTS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Max <codtrap@usa.net>
Message-ID: <38B3B5BA.1FDF3B44@usa.net>
Source record: 63178
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewListedItems&userid=newfoundlander

1374. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8911i0$121$1@nnrp1.deja.com>
Source record: 63179

In article <88v3s9$qi9@news.dns.microsoft.com>,
"Robert Fanfant" <fanfant@ix.netcom.com> wrote:
> What would the inductance value be of 14 turns(tightly wound) 26 gauge
solid
> wire with an air core whose inside diameter is 1/8 of an inch.
>
> Thanks in advance,
>
> -rob
>
>

It's around 2.1 uH or the result of:

L(uH)= a**n**/(9a + 10b) where

a = external coil radius (inches)
b = coil length (inches)
n = number of turns.

This formula is valid for closewound coils and with b >= 0.8a.
Please, recalculate it for security.
(source: Radioamateur's Handbook, 1982)
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1375. Problem with President HR2510 (long post)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Mike <ki5mp@DOTDOT.arrl.net>
Message-ID: <B7Us4.255$Ag.7374@news.corecomm.net>
Source record: 63180
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Greetings,

I purchased a nice little HR2510 from an individual and it suffers from low power output. I have replaced both the driver and final transistors and aligned the transmitter section per the service manual. The maximum output power obtainable on CW and SSB is around 15W. The AM output power can be adjusted to its specified output of 10W and FM is also low at around 7W.

In the process of doing some circuit tracing, I noticed some minor differences between the actual main board and the service manual schematic. For example, the service manual block diagram depicts Q134 as a TX AMP, but on this main board there is no Q134 - there is a Q140 and associated biasing resistors in the immediate area instead, for which there is no such component listed on the block diagram or schematic. The board has mounting holes and silk-screening for Q134 and R167, but Q134 is bypassed with a capacitor where the base and emitter leads would normally go.

This may be a dumb question, but is there an "European" version of this radio? This radio was supposedly purchased in the Netherlands while on a business trip and brought back to the U.S. The silk-screening on the main board identifies it as a PB-111AE instead of the PB-111 designation indicated on the schematic. The schematic printed in the owner's manual has the same schematic as the service manual, for a PB-111 main board.

A little more history on this radio may be in order here. This radio was supposedly a 'new' radio but when it first arrived at my door and was tested, it suffered from apparent parasitic oscillations when operated in SSB mode. It operated perfectly on a dummy load, but when hooked up to a real antenna system and modulated in SSB mode, the power output would "latch" ON at full output (about 25W PEP) and not drop back with no modulation as it should. (I might mention that there is nothing wrong with the antenna system - I tried the radio on three different resonant systems with the same results.) I returned the radio back to the individual and he 'repaired' the radio by replacing the driver transistor (Q133). He first replaced the final transistor and this didn't solve the problem, but the driver replacement apparently did. I received the radio back and the parasitic oscillation problem did appear to be fixed, but then I noticed the power output was significantly lower than it was before and the SWR meter no longer worked. Follow up e-mails with the individual yielded no results to my satisfaction but I decided to keep the radio because it is in such good shape cosmetically.

So, I replaced the driver and final transistors again myself and aligned the PLL and transmitter sections per the service manual with no noticeable gain in performance. Digging deeper I noticed the aforementioned minor circuit

differences (and there may be more.) I have a sneaky suspicion that this (or the original) problem may be related somehow to the SWR detection and/or automatic power cut-back circuitry. As I mentioned, the SWR meter no longer works

Is there anyone out there that has a schematic for the PB-111AE main board and/or any suggestions?

Any input would be appreciated. I apologize for such a long post...

73s
Mike
KI5MP
ki5mp@DOTDOT.arrl.net

(remove the DOTDOT. from address to respond by e-mail)

1376. Activation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: cc <carlos.cortes@usa.net>
Message-ID: <8913hq$7rs$34@duke.telepac.pt>
Source record: 63181

Activation
A.R.V.M. Aldeia da Luz
Date: 18 / 19 March
SPECIAL CALL: CQ7LUZ
Locater: IM58HI
Freq�s: 14.195Mhz * 21.295Mhz * 28.695Mhz * 145.350Mhz * 434.350Mhz
http://www.qsl.net/arvm/aldeiadaluz/
73�s

1377. Program a pic12c671 chip?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <38B41FDF.F6F30A91@juno.com>
Source record: 63182

Hi, I would like to build a audio field strength meter project I saw but it requires burning a pic12c671 chip. I havent been able to find any cheap burners that handle this chip. Can anyone point out a cheap burner I could use or is thier anyone that would burn 2 for me? Thanks, Art. kf7gd@arrl.net

1378. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: price police <police@bellsouth.net>
Message-ID: <38B432A6.6E92F544@bellsouth.net>
Source record: 63183

t

1379. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <97Xs4.9382$84.320228@elnws01>
Source record: 63184
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <88uuscirk1@nnrp1.deja.com>...
> Briefly: if an atom is 0.1 nanometer across, how can it
> intercept light waves which have 500 nanometer wavelengths?
> As an "antenna", an atom is far too small!
>
> Answer: the atom resonates electrically, which creates a
> strong synchronous AC field in its nearfield region. The local
> e-field and b-field of the atom superposes with the fields of
> the incoming EM waves,

It can't be a 'normal' radio wave, or it would disperse. Must be some type of soliton?

> The same thing occurs with conventional radio waves and
> electrically small dipole antennas if a large AC voltage is
> impressed upon the antenna.

Is a large voltage/current necessary? Consider a high permitivity peizoceramic will suck electric flux in, and a high mu ferromagnet will suck magnetic flux in. A shorted multi-turn solenoid, having a greater reluctance than free space will suck in magnetic flux too?

This is part of the mystery of field-theory, wheather you prefer aether or virtual photons. If you place a relatively lower-resistance metal on a carbon sheet that has a voltage gradient, and plot the voltage on the sheet, you will notice a reduced voltage gradient around the low resistance metal object. How does the current know to bend towards the metal discontinuity?

Same with current flowing in bent metal. How does current know to bend smoothly rather than sharply? Electrodynamics has some answers. But the same gradient, or pit, occurs around lower permitivity and permiability materials. Regardless of the energy they contain.

> The same thing occurs with small
> loop antennas if they are given a large current. Actively
> resonating antennas draw in far more energy than passive
> pickup coils.

That is news to me.

> In theory, a tiny loop antenna can behave as if it
> were electrically enormous, and can reach out and intercept
> huge amounts of energy. At VLF frequencies, this effect
> is significant. Nikola Tesla could have used this effect as part
> of his "wireless power" scheme. It explains how even a tiny
> antenna could intercept significant VLF wattage.

I realy doubt it. I believe a highly charged small resonant circuit could cancel out a complementary field.

It seems you have the picture in mind of what powdered iron does around a magnet. I have heard stories about a steel chain around a superconducting magnet, that when energized, became so rigid it could be sat on, unsupported on end. I don't think that is true of space, at least at typical energies. I realy doubt passing more current in a solenoid will reduce its reluctance, or increase permiability.

> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?

1380. WANTED MANUAL

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: MORTEN MARTINSEN <la7hja@c2i.net>
Message-ID: <MqZs4.2501$fS6.221205@juliett.dax.net>
Source record: 63185
Cross-posted to:
aus.radio.amateur.misc,aus.radio.amateur.wicen,rec.radio.amateur.dx,rec.radio.amateur.homebrew,rec.radio.amateur.misc

HI

I have take over antenne equipment from a silent key station.
But i don't have the manual for it.

HY-GAIN DB-1217 YAGI
AND
HY-GAIN TH3MK4 YAGI

If you kan help me send in mail to

la7hja@c2i.net

vy 73 de la7hja Morten

1381. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: AERO SCIENTIFIC <aerosci@chicagonet.net>
Message-ID: <sb901hkfr2a90@corp.supernews.com>
Source record: 63186

The amateur radio handbook has the formula for calculating air wound coils.

John
Robert Fanfant <fanfant@ix.netcom.com> wrote in message
news:88v3s9$qi9@news.dns.microsoft.com...
> What would the inductance value be of 14 turns(tightly wound) 26 gauge
solid
> wire with an air core whose inside diameter is 1/8 of an inch.
>
> Thanks in advance,
>
> -rob
>
>

1382. WORK AT HOME MAKE BIG MONEY $$$$

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-23 00:00:00 UTC
From: GRINCH_E_POO@webtv.net
Message-ID: <10346-38B4A368-11@storefull-245.iap.bryant.webtv.net>
Source record: 63187

Make $700 or more/week while working from the comfort of your home!
Amazing report shows you how! For more information, send $7.00 cash plus
self-addressed stamped envelope to:
Mr. Timothy Miller
300 Vine Street Apt.C
Lebanon, PA 17042

1383. Re: Need websites for wire antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: RobertLaporte <laporterobert@sympatico.ca>
Message-ID: <38B4AA66.4376ACFB@sympatico.ca>
Source record: 63095

Dear Bill,

I would recommend W1FB antenna book, it's a 10$ book easy to get in ham store .

later, Bob

Bill a écrit :

> I am looking for websites on how to built various wire antennas: trapped
> dipoles, rhombic, multi-banders, etc.
>
> Thanks,
> Bill
>
> ----------== Posted via Newsfeeds.Com, Uncensored Usenet News ==----------
> http://www.newsfeeds.com The Largest Usenet Servers in the World!
> ------== Over 73,000 Newsgroups - Including Dedicated Binaries Servers ==-----

1384. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <892b6avrc1@nnrp1.deja.com>
Source record: 63096
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B3A23E.4388@pacbell.net>,
edprice@pacbell.net wrote:
> Bill:
>
> So what limits the energy "sucked up" by the ferrite rod antenna in
that
> AM radio? I don't think I ever heard of a loopstick melting right out
of
> one of those cheap plastic radios.

I imagine that the resistance of the wire, and maybe the losses in
the core would be the biggest limiting factor. If the current in
the loop antenna determines the "effective area" of the antenna,
but also the effective area of the antenna determines the
energy received (and so determines the current) ...then it sounds
to me like feedback, and if so, then there'd be exponential
growth initially when the circuit is first assembled. If the Q
is low, the current would never get to the steep part of
the exponential growth, so wouldn't rise to unexpected high
levels. We might never see any sort of "meltdown", because the
slight heating of the wire nips the growth process in the bud.

That doesn't mean the current wouldn't grow disproportionally huge
if the Q was made much higher.

Also, this phenomenon would be expected to occur at lower
frequencies. If the frequency is high, the effective area would
never become really huge. If the nearfield is assumed to be about
1/3 wavelength wide, then at 500KHz a "superconductor loopstick"
would act like an absorber-disk 200 meters across. That sounds
large, but for a 10KW station at 10KM distance, the ideal
antenna could only grab about a quarter of a watt. Even so, it
would be pretty neat to run a solar-cell motor using a little
bitty antenna.

> Also, specifically which "theory" are you referring to when stating
that
> a small loop antenna can be "electrically enormous"?

The ones discussed in these two papers mentioned in the references:

C. F. Bohren, "How can a particle absorb more than the light incident
on it?", Am J Phys, 51 #4, pp323 Apr 1983

H. Paul and R. Fischer "Light Absorbtion by a dipole", SOV. PHYS. USP.,
26(10) Oct. 1983 pp 923-926

The above authors analyze the effect in terms of atoms and light waves, but the phenomenon is classical physics, so it works for any electrically short antenna connected to a high-Q resonator.

These guys below used the effect as part of a NASA project to study ELF radio. They added active feedback to a loop antenna in order to increase the received energy while allowing the system to remain broadband. If the point is to create a local field in synch with the incoming waves, then it doesn't matter how you do it. You can build a resonator and let the received energy build up a large field. Or you can drive the antenna with a op-amp in a feedback loop that nulls out the wire resistance.

J. F. Sutton and C. C. Spaniol, "An Active Antenna for ELF Magnetic Fields", PROCEEDINGS OF THE INTERNATIONAL TESLA SYMPOSIUM, 1990, International Tesla Society, 1990

I've yet to draw any pictures, but here's one way to convince yourself that this stuff is real. Plot the field lines of one cycle of an EM wave (basically some parallel lines), then superpose the field of a small dipole placed at the spot where the transverse field lines of the EM wave go to zero. The EM wave distorts the field of the dipole, so erase the dipole's field and re-draw it with the appropriate distortion. Now draw some flux lines perpendicular to the lines you've already drawn. These transverse lines show the Poynting-vector energy flow. It comes in from the side, following the EM wave as you'd expect. Then it plunges into the dipole from all sides. (The above papers contain proper diagrams.)

Apparantly ALL antennas do this (they "attract" the Poynting vector lines so the lines dive into the metal surface of the antenna elements.) That's how thin wires can intercept those big broad EM wavefronts. The weirder things only start happening when we make the wavelength enormous, then use a tiny resonator as an antenna rather than a long thin wire. Also, I think it pays to use voltage-mode antennas (dipoles with lots of volts on them) rather than loop antennas, because the loop antennas rely on high currents and consequent heat losses. Build a resonator with small C and large L, and hook it to a dipole. (As opposed to using large C and small L, and hooking it to a loop antenna.)

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1385. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <892bl6u1@nnrp1.deja.com>
Source record: 63097
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B3BFE3.61FA556E@webaxs.net>,
russell shaw <russell@webaxs.net> wrote:
> At last, someone has stated what i figured 10 years ago!
>
> If the losses in a ferrite rod antenna are made very low,
> the currents will become much higher, limited only by the
> radiation resistance which is very low for around 1MHz.
> The selectivity will also become sharper.

When I first started jabbering about this last September, somebody mentioned that a massive loop antenna made from copper pipe can pick up significant energy. There's a guy in Chicago who runs little motors using high-Q resonant antennas (makes for a good perpetual motion hoax!) But if he had an AM tower within a few thousand meters, then that's not so impressive.

What would be impressive is if a resonator could be persuaded to build up a high voltage rather than a high current. Maybe it would take the shape of a tesla coil secondary, but super-conductive. Even if it can intercept a fraction of a watt, a corona discharge at that wattage would be amazing.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1386. Looking for Toshiba S-AV7

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Ethidium <lesbos@uswest.net>
Message-ID: <5H2t4.295$Uc4.12573@news.uswest.net>
Source record: 63098

I am looking for an electronics supplier that carries the Toshiba S-AV7 power amplifier module (IC?) used in the plans for a 2m brick amp in the ARRL Handbook. This is _not_ a WTB ad, I'm still not sure I'm going to buy the thing, but I would like to know if anybody has suggestions where to get it. I've checked jameco, mouser, digikey, etc; none of them carry it. Thanks for any help.

Andy Cowan
KC0GXW

1387. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Robert Strand <rstrand@ihug.com.au>
Message-ID: <38B4BAEF.FC8CC42@ihug.com.au>
Source record: 63099
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

russell shaw wrote:

> At last, someone has stated what i figured 10 years ago!
>
> If the losses in a ferrite rod antenna are made very low,
> the currents will become much higher, limited only by the
> radiation resistance which is very low for around 1MHz.
> The selectivity will also become sharper.

Not such a good thing, if the resonant circuit Q is greater about 200
the bandwidth gets so small that it cuts off the sidebands, which, after
demodulation, attenuates the high freqencies of the base-band signal.

Regards
Rob

1388. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <892gkk$3fi$1@nnrp1.deja.com>
Source record: 63100
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <97Xs4.9382$84.320228@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:
>
> > Answer: the atom resonates electrically, which creates a
> > strong synchronous AC field in its nearfield region. The local
> > e-field and b-field of the atom superposes with the fields of
> > the incoming EM waves,
>
> It can't be a 'normal' radio wave, or it would disperse. Must be some
type
> of soliton?

Nope, it's just the usual e-fields and b-fields that appear
around capacitors and coils. If the coil or capacitor is way
smaller than a wavelength, then you are able to create very strong
AC fields without having much radiation loss. The weird part is
that these fields can themselves act like an "invisible antenna."
They don't radiate, but they do interact with incoming waves if
the waves and the oscillating fields are in synch.

But after thinking about this for weeks, I see that it's not
so weird after all. Ever it was thus. Your normal half-
wave receiving dipole does exactly the same thing. It generates
a local field which, when superposed on the incoming waves, bends
them so that their energy "flows" into the extremely narrow
antenna wire.

We never think about it, but these relatively narrow wires always
have a relatively huge effective area. How can a LINE act as
a good absorber, when the waves look like a PLANE? The line
causes the planes to collapse inwards. If the same is true of
a "pointlike" antenna, and if small antennas can easily
absorb plane waves much larger than themselves, everyone gets
weirded out. But we should also get weirded out about the thinness
of conventional antenna wires.

> > The same thing occurs with conventional radio waves and
> > electrically small dipole antennas if a large AC voltage is
> > impressed upon the antenna.
>
> Is a large voltage/current necessary? Consider a high permitivity
> peizoceramic will suck electric flux in, and a high mu ferromagnet
will suck
> magnetic flux in. A shorted multi-turn solenoid, having a greater

reluctance
> than free space will suck in magnetic flux too?

I think this is the same effect. The EM waves can induce a current
in a loop antenna, but they can also align a bunch of electron
spins in a ferrite rod. In both cases there is energy stored
as fields around the antenna, and the enhanced fields cause a
greater energy flow to be diverted into the antenna from
surrounding space. I guess an LC resonator is like a "giant
iron atom" (or an iron atom is like a tuned loop antenna.)

However, a PZT or ferrite rod is broadband. The effect should be
much larger during resonance because the stored energy in
the resonator can build up to a high level and create a much
larger field. I think.

> This is part of the mystery of field-theory, wheather you prefer
aether or
> virtual photons. If you place a relatively lower-resistance metal on a
> carbon sheet that has a voltage gradient, and plot the voltage on the
sheet,
> you will notice a reduced voltage gradient around the low resistance
metal
> object. How does the current know to bend towards the metal
discontinuity?

This resonant-antenna idea would be equivalent to replacing your
metal object with two electrodes connected to a tiny battery.
It bends the fields at a much greater distance than a passive
object. Or better yet, make it passive but let it power
itself: connect a large-value capacitor to the electrodes. As
the drive voltage on the carbon sheet pumps current through
the capacitor, its voltage rises, but its incoming wattage does
not remain constant. The capacitor intercepts energy at a
greater rate when it is partially charged than when it is
totally discharged. By DRIVING those electrodes, our receiver
can absorb more energy. It's not a perfect analogy, but I think
it illustrates the basic idea behind a driven (oscillating) antenna.

> > The same thing occurs with small
> > loop antennas if they are given a large current. Actively
> > resonating antennas draw in far more energy than passive
> > pickup coils.
>
> That is news to me.

It's the weirdest part! Suppose I set up two big metal plates a
few feet apart, and connect a high-freq AC power supply to them.
Any small pair of "pickup plates" with a load resistor could
intercept some of this energy via capacitive coupling. We
could improve things by chosing the right load resistor to
draw maximum power from the pickup plates. However, what happens

if we connect a coil across the pickup plates and tune it
for resonance? A big oscillation builds up. The voltage across
the plates grows much higher, but the induced current going
through them does not drop in proportion, and this means that
the received power is higher. It resembles impedance matching,
but it's really something different. It involves the e-field and
b-field in the region around the plates rather than the impedance
of circuit components. Rather than "impedance match", it
more resembles an increase in the AREA of the pickup plates.

Yes it's just a "coupling" effect. But where EM waves are
concerned, whenever we "couple" to a larger region of space,
the effective area of the antenna becomes larger, and it
essentially sucks energy in from a greater distance around itself.

As a friend pointed out, AM radio really "sucks."

I like the concept of the jar of sodium gas which blocks sodium
light but passes everything else. Those atoms are way smaller
than the light waves, right? At most frequencies they act small,
and the gas is transparent. At the sodium line frequency, how
is it that they can block the light? Simple: each atom grows
a fuzzy black cloud around itself, and the cloud is made
of oscillating EM fields at the resonant frequency. The "cloud" is
in synch with the sodium light, so it only looks big and black to
the waves at that frequency. When you tune your light to the
right frequency, the little atoms seem to swell into big
black puffballs. So does the loopstick in a portable AM radio.
Or so this "resonant antenna" concept says.

> It seems you have the picture in mind of what powdered iron does
around a
> magnet. I have heard stories about a steel chain around a
superconducting
> magnet, that when energized, became so rigid it could be sat on,
unsupported
> on end. I don't think that is true of space, at least at typical
energies. I
> realy doubt passing more current in a solenoid will reduce its
reluctance,
> or increase permiability.

Hey, that's it! That's what's happening. It doesn't have anything
to do with the DC permiability of course. Because the
oscillating fields of the tuned circuit are locked in synch with
the incoming EM waves, they present a constant "back EMF" which
lets the antenna interact more strongly with the waves. It only
works at a particular frequency, but at that frequency, the
loop antenna would seem to attain a huge permiability, and it
would distort the fields across a much greater volume of space,
as if it had grown a big ferrite rod down its middle.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1389. FS: parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <892vt2$12b$1@SOLAIR2.EUnet.yu>
Source record: 63101
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1390. Re: Niggling question about GG Linears

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38B50580.8F38B30B@cmcorp.com>
Source record: 63102

Barry McCarthy wrote:

> This has been niggling at me for a few days now and I can't think of an
> answer.
>
> Why is it that in a GG linear using a directly heated filament valve
> there is no 50/60c/s mains hum superimposed on the signal?
>
> --
> Barry McCarthy

It's an OLD tube that has no CATHODE, I doubt you are using any of this
type.

And ALL tubes have directly heated filaments.

Grounding the grid isolates the cathode from the plate for RF purposes.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1391. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38B51534.94DCB897@nospam.gecm.com>
Source record: 63103
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> Here's some weird ramblings I've posted on my site:
>
> ENERGY-SUCKING ANTENNAS (electrically small resonators)
> http://www.amasci.com/tesla/tesceive.html
>
> MORE MUSINGS ABOUT ENERGY-SUCKING ANTENNAS
> http://www.amasci.com/tesla/tescv2.html
>
> Briefly: if an atom is 0.1 nanometer across, how can it
> intercept light waves which have 500 nanometer wavelengths?
> As an "antenna", an atom is far too small!
>
> Answer: the atom resonates electrically, which creates a
> strong synchronous AC field in its nearfield region. The local
> e-field and b-field of the atom superposes with the fields of
> the incoming EM waves, which causes the waves to bend towards
> the atom. If we plot the Poynting vector field, we find that
> the atom "sucks in" the energy like a miniature black hole.
> As the waves march along, the phase of the atom's fields stay in
> step, and the Poynting vector keeps pointing in towards the
> atom. This works even though the atom is extremely small compared
> to the wavelength, since the fields of the nearfield region *ARE*
> the antenna.
>
> The same thing occurs with conventional radio waves and
> electrically small dipole antennas if a large AC voltage is
> impressed upon the antenna. The same thing occurs with small
> loop antennas if they are given a large current. Actively
> resonating antennas draw in far more energy than passive
> pickup coils. In theory, a tiny loop antenna can behave as if it
> were electrically enormous, and can reach out and intercept
> huge amounts of energy. At VLF frequencies, this effect
> is significant. Nikola Tesla could have used this effect as part
> of his "wireless power" scheme. It explains how even a tiny
> antenna could intercept significant VLF wattage.
>
> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))

> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

Small resonant antennas can be very effective. If you have a lossless small
antenna its receiving area is wavelength^2/4pi, no matter how small it is.
So at 1MHz even a tiny antenna has a capture area of about 700 square
metres.
BUT there's a catch - it has to be a lossless antenna and the impedance of
the
load (i.e. the input impedance of the receiver) has to be the complex
conjugate
of the antenna impedance. If the antenna impedance is (say) 10^-3 - j1000
there is a problem in matching that without introducing losses. There's
another
catch - the Q factor of my example is 10^6, which means that its
bandwidth
is only 1Hz for a 1MHz carrier frequency. That is useless for just about
any purpose.
Loopstick antennas as used in radios are effective for their purpose but
they
are very lossy. It doesn't matter because enough power is transmitted to
allow the programme to get through. With one transmitter serving 1 million

cheap receivers the economics of this system is right. For communications,

when there is 1 transmitter and 1 receiver, it is better to transmit less
power
and use a more efficient receive antenna.
Alan

1392. Problem with Uniden HR2510

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Mike <ki5mp@DOTDOT.arrl.net>
Message-ID: <CF9t4.372$ak5.13590@news.corecomm.net>
Source record: 63104
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.cb,rec.radio.swap

Greetings,

I purchased a nice little HR2510 from an individual and it suffers from low power output. I have replaced both the driver and final transistors and aligned the transmitter section per the service manual. The maximum output power obtainable on CW and SSB is around 15W. The AM output power can be adjusted to its specified output of 10W and FM is also low at around 7W.

In the process of doing some circuit tracing, I noticed some minor differences between the actual main board and the service manual schematic. For example, the service manual block diagram depicts Q134 as a TX AMP, but on this main board there is no Q134 - there is a Q140 and associated biasing resistors in the immediate area instead, for which there is no such component listed on the block diagram or schematic. The board has mounting holes and silk-screening for Q134 and R167, but Q134 is bypassed with a capacitor where the base and emitter leads would normally go.

This may be a dumb question, but is there an "European" version of this radio? This radio was supposedly purchased in the Netherlands while on a business trip and brought back to the U.S. The silk-screening on the main board identifies it as a PB-111AE instead of the PB-111 designation indicated on the schematic. The schematic printed in the owner's manual has the same schematic as the service manual, for a PB-111 main board.

A little more history on this radio may be in order here. This radio was supposedly a 'new' radio but when it first arrived at my door and was tested, it suffered from apparent parasitic oscillations when operated in SSB mode. It operated perfectly on a dummy load, but when hooked up to a real antenna system and modulated in SSB mode, the power output would "latch" ON at full output (about 25W PEP) and not drop back with no modulation as it should. (I might mention that there is nothing wrong with the antenna system - I tried the radio on three different resonant systems with the same results.) I returned the radio back to the individual and he 'repaired' the radio by replacing the driver transistor (Q133). He first replaced the final transistor and this didn't solve the problem, but the driver replacement apparently did. I received the radio back and the parasitic oscillation problem did appear to be fixed, but then I noticed the power output was significantly lower than it was before and the SWR meter no longer worked. Follow up e-mails with the individual yielded no results to my satisfaction but I decided to keep the radio because it is in such good shape cosmetically.

So, I replaced the driver and final transistors again myself and aligned the PLL and transmitter sections per the service manual with no noticeable gain in performance. Digging deeper I noticed the aforementioned minor circuit

differences (and there may be more.) I have a sneaky suspicion that this (or the original) problem may be related somehow to the SWR detection and/or automatic power cut-back circuitry. As I mentioned, the SWR meter no longer works

Is there anyone out there that has a schematic for the PB-111AE main board and/or any suggestions?

Any input would be appreciated. I apologize for such a long post...

73s
Mike
KI5MP
ki5mp@DOTDOT.arrl.net

(remove the DOTDOT. from address to respond by e-mail)

1393. output xstrs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: rlafrance@actechdrives.com
Message-ID: <893bis$pj3$1@news.netmar.com>
Source record: 63105

I am looking for source of output (bipolar or mosfet) transistors.
Seems as though Mot has discontinued some of their better choices.
I am putting amp together for 40-60mHz 20mw input 25w output for
RFI susceptability testing of industrial motor speed control. Any
help would be appreciated.

Best Regards,
Bob LaFrance
AC Technology

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made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

1394. Re: Need websites for wire antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38B54BA2.3EAEB5AA@ix.netcom.com>
Source record: 63106

> Bill a ï¿½crit :
>
> > I am looking for websites on how to built various wire antennas: trapped
> > dipoles, rhombic, multi-banders, etc.
> >
> > Thanks,
> > Bill
>

==========
Try URL:
http://www.ac6v.com/pageant.html
Lots of Antenna Projects there

Humor of the day:
Antenna Movie -- Gone With The Wind
Starring Yagi Berra

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

1395. Rob Mills - Sonar FS-23 - lost your email address

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <qrct4.165$qw5.14574@dfw-service2.ext.raytheon.com>
Source record: 63107
Cross-posted to:
rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.cb

Rob Mills... I bought the Sonar FS-23 from you a few weeks ago.
If you're out there, please drop me a line. I lost your email
address.

73,
Dean, K5DH

1396. Re: Niggling question about GG Linears

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <id86vSAWoUt4Ew0R@g0wbf.freeserve.co.uk>
Source record: 63108

In article <38B50580.8F38B30B@cmcorp.com>, Thomas C. Sefranek
<tcs@cmcorp.com> writes
Thanks for your reply, Thomas,

>It's an OLD tube that has no CATHODE, I doubt you are using any of this
>type.
>
813, 3-500, 811A, 572B, etc. all pretty old, but still in current use.

>And ALL tubes have directly heated filaments.
>
Yes. Sloppy use of English. Welcome to the Pedants Club. I am a long-
standing and vociferous member of the (British) English Language Branch.
:-)

>Grounding the grid isolates the cathode from the plate for RF purposes.

But 50c/s(UK) 60c/s(US) isn't RF. And no cathode.
I Thought about the thermal inefficiency, but concluded that that was
why cathodes were invented. If you have ever experienced a
heater/cathode short, you will be familiar with the magnitude of hum
that is created.

A friend, EI9GQ suggested an answer which I think is correct. The
filament is always fed with a centre-tapped transformer, which feeds the
current in anti-phase and therefor the hum is self cancelling.

Sounds plausible to me when I recall the 'humdigers' we used to use on
audio amps. in my teens, but it's such a long time ago.

--
Barry McCarthy
G0WBF

1397. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Peter Lawton <peter_john.lawton@virgin.net>
Message-ID: <38B56653.3A44@virgin.net>
Source record: 63109
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Alan Boswell wrote:
>

> Small resonant antennas can be very effective. If you have a lossless
> small
> antenna its receiving area is wavelength^2/4pi, no matter how small it is.
> So at 1MHz even a tiny antenna has a capture area of about 700 square
> metres.

So does that mean that it has bigger shadow than one might expect?
If you had two such antennas fairly close to each other, the one would
decrease the signal available for the other?

Peter Lawton

1398. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <951397177.754233480@news.indigo.ie>
Source record: 63110

"Robert Fanfant" <fanfant@ix.netcom.com> wrote:
>What would the inductance value be of 14 turns(tightly wound) 26 gauge solid
>wire with an air core whose inside diameter is 1/8 of an inch.
>
>Thanks in advance,
>
>-rob

It is difficult to calculate the exact inductance of an
air cored inductor. Using the ARRL handbook formula:

d^2 n^2 / 18d + 40len gives a result of about 0.26 microHenries.

d = coil diameter in inches
n = number of turns
len = coil length in inches.

The W6GGV and G4FGQ programs both give a result of about
0.3 microHenries.

73, Ed. EI9GQ.

--
Remove 'X' to reply.

1399. Re: Niggling question about GG Linears

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38B58840.6BFA@ixpres.com>
Source record: 63111

Barry OM,
There is no AC hum on the signal for two reasons:
1). The large amount of plate current drawn (large fractions of an ampere), tends to swamp out the tiny variations due to the filament temperature following the AC filament voltage excursions. In addition, large filaments have sufficient thermal mass to greatly attenuate changes in the space charge around the filament due to AC on the filament.
2). The cathode current DC return is via a center tapped filament transformer winding, which, as a first-order, cancels the AC voltage that would otherwise be applied between grid and cathode. This same technique is used with audio low level tube amplifiers.

73,
Don, W6JL

Barry McCarthy wrote:
>
> This has been niggling at me for a few days now and I can't think of an
> answer.
>
> Why is it that in a GG linear using a directly heated filament valve
> there is no 50/60c/s mains hum superimposed on the signal?
>
> --
> Barry McCarthy

--
ï¿½ï¿½à¡±ï¿½

1400. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <k4gt4.10143$84.332786@elnws01>
Source record: 63112
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Were talking apples, oranges and tomatoes here. Mixing behaviors and metaphors will get very confusing and deceptive. There are three ball parks to play in:

1. The vacuum or aether, and its fields and/or virtual particles
2. Electrons and nuclei that have their own fields and modes
3. Antenni or transducers, inductors, capacitors, ferrites and ceramics.

Electrons and particles seem to be forms of the vacuum energy has twisted into stable shapes (according to E=MC^2), particles can condense out of the vacuum with appropriate energy and conditions. And antenni, inductors and capacitors are made out of particles. In effect the unpaired spins of ferrites make them big (magnetic) atoms.

Atoms are dynamic systems. A photon, with an impulse-like field, causes orbital momentum change in the electron-atom system, that changes its field to cancel the photon field as it is absorbed. The fields of photons and atoms are matched, because atoms make photons (unless the atoms have a velocity spread, such as in a high-temperature/pressure laser). The atom is not like a normal tuned circuit, it dyamicaly changes tuning as it absorbs and radiates.

If the atom doesn't absorb the photon, the electron probably has some type of temporary orbit change, and re-radiates the photon. There is a time delay as energy leaves the photon field and shakes the electron-atom system. Therefore the refractive index (time delay) effects we see with glass, water and transparent materials?

Rather than orbiting particles, I like the concept of resonant ring particles joined by fields, and separated by trapped photons (stored resonant modes), such as the models at http://www.oophda.com/ and http://www.commonsensescience.org/ Nothing orbits, but strings of flux vibrate a geodesic dome of electrons around the nucleus.

Why don't atoms and photons radiate their fields away? What confines the fields? Some form of nonlinearity or extra dimensions are needed, which I was able to gather from some papers at http://xxx.lanl.gov/find :

"9902008 The energy conservation law in classical electrodynamics" (which highlights problems with the Poynting vector) and "9802039 Historical Note on Relativistic Theories of Electromagnetism".

I'm partial to considering a 4th longitudinal wave mass-time dimension, that can compress (the magnetic force), and increase density (electric force) which Paul Stowe explained here back in 7/1/99 in his "Re: what *is* magnetic permeability ?" post, which you can retrieve at Deja. The other

three dimension (normal space) only support transverse, not longitudinal waves. Charge, coulombs, equates to kilogram-seconds with a magnetic tension, and electric density. This may explain why displacement currents in space do not produce magnetic fields.

Oscillating fields trap themselves into solitons-photon waves or loop in on themselves to form soliton standing wave particles, that have increased density, which shows up as electric charge. The increased density, permitivity, trapped by the soliton particles is what sucks flux in, warps the fields around the particles.

But to make your own radio frequency particle, or electromagnetic soliton wave (and wouldn't those be usefull!!!) it would probably require quite a bit of power. Maybe some differential-geometery expert would care to help me calculate the cutoff frequency and power densities for such things?

The field around your tank might cancel an incident wave, but it better not radiate away its energy. If it is an active system, it may have a large static field that changes to cancel an incident wave, like a feedback control system. But then it can't extend over 1/2 wavelength deep without an extended structure. And what does it buy you? Probably not a better noise figure or power efficiency.

One application I thought of was a miniture phased array radar. A small, say 8 x 10" panel has ferro-ceramic spheres arranged in a grid, like a photonic crystal. In the high permitivity-permiability substrate I could shrink the size of the array. But to impedance match the array to space so it will transduce energy, I would have to have a large matching device, that would defeat the purpose of the small array.

>Your normal half-
> wave receiving dipole does exactly the same thing. It generates
> a local field which, when superposed on the incoming waves, bends
> them so that their energy "flows" into the extremely narrow
> antenna wire.

The antenna wire is a conductor which is a virual dead short for the electric field of space (x-rays above the metal plasma-freq notwithstanding). But it doesn't do much good over 1/2 wavelength

>How can a LINE act as
> a good absorber, when the waves look like a PLANE?

It can only suck in as much flux as space will permit it, by setting up opposing currents and fields, according to electrodynamics. You can model space as an LC network in this case. Its not a black hole.

> I guess an LC resonator is like a "giant iron atom" (or an iron atom is like a tuned loop antenna.)

The LC resonator will not warp space (electricaly) around it, like an atom will. It will radiate away its field.

Once again, I don't see how (atomic particles notwithstanding) the current and voltages in inductors and capacitors will cause more flux to be bent into them, although they will cancel out or transmit as well as larger elements.

>> If you place a relatively lower-resistance metal on a
>> carbon sheet that has a voltage gradient, and plot the voltage on the
>sheet,
>> you will notice a reduced voltage gradient around the low resistance
>metal
>> object. How does the current know to bend towards the metal
>discontinuity?
>
> This resonant-antenna idea would be equivalent to replacing your
> metal object with two electrodes connected to a tiny battery.
> It bends the fields at a much greater distance than a passive
> object.

Yes, the gradient has changed, no energy is not otherwise sucked in. A plot of the impedance of the sheet will reveal it is linear, a battery will just superpostion itself. If the sheet was a nonlinear semiconductor, that's different. If space is longitudinal and/or hyperdimensional, thats like a nonlinear sheet.

> I like the concept of the jar of sodium gas which blocks sodium
> light but passes everything else. Those atoms are way smaller
> than the light waves, right?

Both the light and atoms are probably smaller physicaly than electricaly

>At the sodium line frequency, how
> is it that they can block the light?

The absorb it, but don't re-radiate it? Convert it too heat via atomic vibration?

Scott

1401. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38B58F6E.85777809@agilent.com>
Source record: 63113
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist (William Beaty) wrote:

> The same thing occurs with conventional radio waves and
> electrically small dipole antennas if a large AC voltage is
> impressed upon the antenna. The same thing occurs with small
> loop antennas if they are given a large current. Actively
> resonating antennas draw in far more energy than passive
> pickup coils.

Are you suggesting that such antennas are not linear systems?

> In theory, a tiny loop antenna can behave as if it
> were electrically enormous, and can reach out and intercept
> huge amounts of energy.

Do you have pointers to such theory?

> At VLF frequencies, this effect
> is significant. Nikola Tesla could have used this effect as part
> of his "wireless power" scheme. It explains how even a tiny
> antenna could intercept significant VLF wattage.

I live a couple wavelengths from a VLF transmitting station that
radiates about 500kW. Do you have an estimate of the useful energy I
could expect to intercept ... with how tiny an antenna, and with what
sort of practical configuration?
>
> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?

Are you proposing that they (loopsticks) might be any different than
explained in the standard antenna reference books? It seems to me that
those explanations predict the performance actually measured for such
antennas.

Cheers,
Tom

1402. Re: Looking for Toshiba S-AV7

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8bb6pm.akv.X@animas.frontier.net>
Source record: 63114

On Thu, 24 Feb 2000 04:38:43 -0000, Ethidium wrote:
>I am looking for an electronics supplier that carries the Toshiba S-AV7

http://www.rfparts.com/
1-800-737-2787

HTH es 73
Jonesy W3DHJ

--
SK

--
Marvin L Jones jonz--AT>>frontier.net | W3DHJ
Gunnison, Colorado | Jonesy
7,703' -- 2,345m | DM68mn

1403. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8948v1$d2i$1@nnrp1.deja.com>
Source record: 63115
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <k4gt4.10143$84.332786@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:
> Were talking apples, oranges and tomatoes here.

True. There are the static fields associated with charges and
with the spin of charges. There are the dynamic fields of the
nearfield region. And there are the EM fields of propagating
waves. All of these are part of antenna physics, and also part
of coil/capacitor physics. If you want get into other
things besides Maxwell's equations and conventional Quantum
Physics, then that's frontier science. I'm talking
conventional science here.

> Atoms are dynamic systems. A photon, with an impulse-like field,

A photon does not have an impulse-like field, at least according
to conventional Quantum Mechanics. It has an impulse-like
interaction with atoms, but that's entirely different. For example,
a single photon can carry an entire 1MHz radio wave, yet the photon
is still pointlike (and the Fourier spectrum of such a tiny
pointlike field would be broadband rather than single-frequency.)
For photons to be pointlike, yet without ending up with a
broadband frequency spectrum, we assume that the fields
associated with photons are spread out over a huge volume of
space, yet the photons themselves are not. A photon is not like
an electron, it does not have flux lines diving into the
photon. Instead, the flux-lines of a big broad EM wave ARE
the photon, and the photon *IS* the big broad EM wave. This
involves wave/particle duality, wavefunction collapse,
and Schrodinger's Cat stuff of course.

> The atom is
> not like a normal tuned circuit, it dyamicaly changes tuning as it
absorbs
> and radiates.

That's what I'm wondering about. If I visualize an atom to be
a normal tuned circuit which also has nonlinear characteristics
AFTER it absorbs energy, then I can better understand how tiny
atoms can absorb relatively huge wavelengths of light. DURING
the absorbtion of an EM wave, I can visualize the atom as being
a coil/capacitor which surrounds itself with fields and behaves
like a conventional EM antenna.

One incorrect explanation I've heard is this: atoms can absorb
long lightwaves because atoms absorb tiny photons rather than
absorbing the waves themselves.

This is not true. It violates wave/particle duality. The
correct explanation is in the Bohren paper. Light does NOT
change into tiny photons in order to be absorbed, any more than
antenna wires absorb tiny photons rather than big broad EM
plane waves. In both cases we can think entirely in terms
of fields and forces applied to charges. As with antennas, we MUST
be able to explain light absorbtion in terms of either waves
OR particles, otherwise we've discovered a hole in Quantum
Mechanics. If you discover a situation where EM waves MUST be
made of photons rather than fields, then you've discovered
something important which is not part of normal science. The
Bohren paper shows how to explain atomic absorbtion in terms of
antennas and wave mechanics rather than particle interactions.
It's conventional science. True, it is very non-traditional.
That's why I like it! :)

> Rather than orbiting particles, I like the concept of resonant ring
> particles joined by fields, and separated by trapped photons (stored
> resonant modes), such as the models at http://www.oophda.com/ and
> http://www.commonsensescience.org/ Nothing orbits, but strings of flux
> vibrate a geodesic dome of electrons around the nucleus.

Good analogy. Sounds analogous to LC resonators to, eh?

> >How can a LINE act as
> > a good absorber, when the waves look like a PLANE?
>
> It can only suck in as much flux as space will permit it, by setting
up
> opposing currents and fields, according to electrodynamics. You can
model
> space as an LC network in this case. Its not a black hole.

Exactly. That's my point. The fields of the antenna act to suck
EM waves into the wire. In the example of the half-wave dipole
two things get missed:

If we could make the fields very strong, even a much
smaller receiving antenna could "suck in" EM waves.

This explains how a 0.1 nanometer atom can absorb waves
of 600 nanometers wavelength, but without needing to
include the "photon" concept in our explanations.

> > I guess an LC resonator is like a "giant iron atom" (or an iron
atom is
> like a tuned loop antenna.)
>
> The LC resonator will not warp space (electricaly) around it, like an
atom

> will. It will radiate away its field.
>
> Once again, I don't see how (atomic particles notwithstanding) the
current
> and voltages in inductors and capacitors will cause more flux to be
bent
> into them, although they will cancel out or transmit as well as larger
> elements.

The inductors and capacitors do the same thing that a thin
antenna wire does. A thin antenna wire acts like a broad sheet
of absorbtive material. It does so because the fields created
by the current and voltage of the wire cause EM energy to divert
from space and flow into the wire. A one-dimensional antenna wire
can absorb a two-dimensional plane wave, but a zero-dimensional
dipole (a tiny coil or capacitor) can do the same thing for the
same reasons. If an antenna wire can erect a large "absorber
sheet" thats made of fields, then a tiny coil or capacitor can do
the same. The explanation is contained in totally conventional
field dynamics. The only unusual part is that people don't think
in these terms already!

> >> If you place a relatively lower-resistance metal on a
> >> carbon sheet that has a voltage gradient, and plot the voltage on
the
> >sheet,
> >> you will notice a reduced voltage gradient around the low
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> superpostion itself. If the sheet was a nonlinear semiconductor,
that's
> different. If space is longitudinal and/or hyperdimensional, thats
like a
> nonlinear sheet.

I'm not being entirely clear. The "nonlinearity" involves changes
in the shape of the linear fields, not nonlinearities in the
medium. In the carbon-sheet example, it boils down to this:
a charged capacitor absorbs energy at a greater rate than an

uncharged capacitor if the charging current is the same for
both, since energy absorbtion is just V x I. If I is
relatively constant, then a capacitor with larger V is absorbing
more energy per second. This is obvious in terms of
circuit concepts. I terms of EM field concepts, we end up
realizing that the distorted voltage fields created by the
charged capacitor will end up attracting more energy from the
carbon sheet. This is a non-traditional way to view the
situation, but it is just as correct. The "nonlinearity"
is a natural part of P = V x I.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1404. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8949eedfp1@nnrp1.deja.com>
Source record: 63116
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B56653.3A44@virgin.net>,
peter_john.lawton@virgin.net wrote:
> Alan Boswell wrote:
> >
>
> So does that mean that it has bigger shadow than one might expect?
> If you had two such antennas fairly close to each other, the one would
> decrease the signal available for the other?

AM loopstick antennas supposedly do just this.

I don't have two AM portable radios here, but I've heard that if
you receive a weak station with one radio, then you tune
a nearby *unpowered* radio to the same frequency, the unpowered
radio can steal some of the signal. That's the shadow effect.
Even when the power is off, there's still a tuning capacitor
connected across the loopstick. (The AGC in the radios will
probably hide this effect if strong stations are used.)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

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1405. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Cortland Richmond <Cortland.Richmond@usa.alcatel.com>
Message-ID: <38B5AE7C.477D51C5@usa.alcatel.com>
Source record: 63117
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

I understand that atom/photon interaction is a result of (or causes)
changes in the energy levels of the associated electrons. Since these energy
levels are quantized, such interactions may only occur at specific energy
levels, which explanation got Einstein the Nobel prize. However, we are
talking about photons of _light_ here, not radio. As far as I know, the
lowest frequencies at which atoms may absorb or emit energy in this manner
are in the microwave range, where the effect lets masers operate. Or used
to, until transistors got so good.

Cortland
(ka5s@saber.net)

Cortland
(ka5s@saber.ent)

Science Hobbyist wrote:

> In article <k4gt4.10143$84.332786@elnws01>,
> "Scott Stephens" <Scott2@Mediaone.net> wrote:
> > Were talking apples, oranges and tomatoes here.
>
> True. There are the static fields associated with charges and
> with the spin of charges. There are the dynamic fields of the
> nearfield region. And there are the EM fields of propagating
> waves. All of these are part of antenna physics, and also part
> of coil/capacitor physics. If you want get into other
> things besides Maxwell's equations and conventional Quantum
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> > Atoms are dynamic systems. A photon, with an impulse-like field,
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> to conventional Quantum Mechanics. It has an impulse-like
> interaction with atoms, but that's entirely different. For example,
> a single photon can carry an entire 1MHz radio wave, yet the photon
> is still pointlike (and the Fourier spectrum of such a tiny
> pointlike field would be broadband rather than single-frequency.)
> For photons to be pointlike, yet without ending up with a
> broadband frequency spectrum, we assume that the fields
> associated with photons are spread out over a huge volume of
> space, yet the photons themselves are not. A photon is not like
> an electron, it does not have flux lines diving into the
> photon. Instead, the flux-lines of a big broad EM wave ARE

> the photon, and the photon *IS* the big broad EM wave. This
> involves wave/particle duality, wavefunction collapse,
> and Schrodinger's Cat stuff of course.
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> > and radiates.
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> That's what I'm wondering about. If I visualize an atom to be
> a normal tuned circuit which also has nonlinear characteristics
> AFTER it absorbs energy, then I can better understand how tiny
> atoms can absorb relatively huge wavelengths of light. DURING
> the absorbtion of an EM wave, I can visualize the atom as being
> a coil/capacitor which surrounds itself with fields and behaves
> like a conventional EM antenna.
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> One incorrect explanation I've heard is this: atoms can absorb
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> absorbing the waves themselves.
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> This is not true. It violates wave/particle duality. The
> correct explanation is in the Bohren paper. Light does NOT
> change into tiny photons in order to be absorbed, any more than
> antenna wires absorb tiny photons rather than big broad EM
> plane waves. In both cases we can think entirely in terms
> of fields and forces applied to charges. As with antennas, we MUST
> be able to explain light absorbtion in terms of either waves
> OR particles, otherwise we've discovered a hole in Quantum
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> > resonant modes), such as the models at http://www.oophda.com/ and
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> Good analogy. Sounds analogous to LC resonators to, eh?
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> > > a good absorber, when the waves look like a PLANE?
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> > It can only suck in as much flux as space will permit it, by setting
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> > space as an LC network in this case. Its not a black hole.
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> EM waves into the wire. In the example of the half-wave dipole
> two things get missed:
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> smaller receiving antenna could "suck in" EM waves.
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> antenna wire does. A thin antenna wire acts like a broad sheet
> of absorbtive material. It does so because the fields created
> by the current and voltage of the wire cause EM energy to divert
> from space and flow into the wire. A one-dimensional antenna wire
> can absorb a two-dimensional plane wave, but a zero-dimensional
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> a charged capacitor absorbs energy at a greater rate than an
> uncharged capacitor if the charging current is the same for
> both, since energy absorbtion is just V x I. If I is
> relatively constant, then a capacitor with larger V is absorbing
> more energy per second. This is obvious in terms of
> circuit concepts. I terms of EM field concepts, we end up
> realizing that the distorted voltage fields created by the
> charged capacitor will end up attracting more energy from the
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> situation, but it is just as correct. The "nonlinearity"
> is a natural part of P = V x I.
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> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
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1406. Re: Niggling question about GG Linears

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <yaiC3DAx1at4Ew2$@g0wbf.freeserve.co.uk>
Source record: 63118

In article <38B58840.6BFA@ixpres.com>, Don W6JL <W6JL@ixpres.com>
writes
>Barry OM,
> There is no AC hum on the signal for two reasons:
> 1). The large amount of plate current drawn (large fractions of an
>ampere), tends to swamp out the tiny variations due to the filament
>temperature following the AC filament voltage excursions. In addition,
>large filaments have sufficient thermal mass to greatly attenuate
>changes in the space charge around the filament due to AC on the
>filament.
> 2). The cathode current DC return is via a center tapped filament
>transformer winding, which, as a first-order, cancels the AC voltage
>that would otherwise be applied between grid and cathode. This same
>technique is used with audio low level tube amplifiers.
>
> 73,
> Don, W6JL

Thanks Don,

That sounds definitive and will do for me.
I should have remembered the humdingers we used to fit in audio amps all
those years ago. Also I had not taken into account the mass of the
filament. When its carrying 10A +, it needs to be pretty hefty.

Thanks to every body else who replied, by mail or NG.
--
Barry McCarthy
G0WBF

1407. Re: output xstrs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38B5B10A.29AA@pop.removethistomailme.net>
Source record: 63119

rlafrance@actechdrives.com wrote:
>
> I am looking for source of output (bipolar or mosfet) transistors.
> Seems as though Mot has discontinued some of their better choices.
> I am putting amp together for 40-60mHz 20mw input 25w output for
> RFI susceptability testing of industrial motor speed control. Any
> help would be appreciated.
>
> Best Regards,
> Bob LaFrance
> AC Technology
>

http://www.rfparts.com has a reasonable selection.

-- jm

---

http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1408. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <9Mjt4.10475$84.334756@elnws01>
Source record: 63120
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <8948v1$d2i$1@nnrp1.deja.com>...
>In article <k4gt4.10143$84.332786@elnws01>,
> "Scott Stephens" <Scott2@Mediaone.net> wrote:

>> Atoms are dynamic systems. A photon, with an impulse-like field,

I mean a photon is not a sinusoid wave train...

>For example a single photon can carry an entire 1MHz radio wave
...
>and the Fourier spectrum of such a tiny pointlike field would be broadband
rather than single-frequency.)

Of course, it doesn't oscillate long certainly, isn't the bandwidth
inversely proportional to the pulse width?

> For photons to be pointlike, yet without ending up with a
> broadband frequency spectrum, we assume that the fields
> associated with photons are spread out over a huge volume of
> space, yet the photons themselves are not.

Yea, and an advance wave has to be emitted by the recieving atom to travel
backwards in time to the photon emitting atom, so it can emit the photon,
right? I hate that about QED. Just because the theory is so irritatingly
accurate, doesn't mean reality is realy that way. The fourier transform is
not the only one. If you can stomach extra dimensions, or longitudinal waves
and nonlinear equations, you can have solitons and Wavelets and no spooky
QED non-sense that is so well-refuted at http://www.commonsensescience.org/

> A photon is not like
> an electron, it does not have flux lines diving into the
> photon. Instead, the flux-lines of a big broad EM wave ARE
> the photon, and the photon *IS* the big broad EM wave. This
> involves wave/particle duality, wavefunction collapse,
> and Schrodinger's Cat stuff of course.

Solitons are wave-particles that are compact and non-dispersive like
particles, and scatter and interfere like waves.

>> It can only suck in as much flux as space will permit it, by setting
>up
>> opposing currents and fields, according to electrodynamics.

> Exactly. That's my point. The fields of the antenna act to suck
> EM waves into the wire. In the example of the half-wave dipole
> two things get missed:

>
> If we could make the fields very strong, even a much
> smaller receiving antenna could "suck in" EM waves.

No, you missed my point! Its not the field of the antenna, its the displacement currents, the reaction fields in space that prevents more flux from flowing into the antenna. Poisson's equation.

> The inductors and capacitors do the same thing that a thin
> antenna wire does. A thin antenna wire acts like a broad sheet
> of absorbtive material. It does so because the fields created
> by the current and voltage of the wire cause EM energy to divert
> from space and flow into the wire.

I don't buy it. It is like your saying the voltage across or current through a resistor determines its resistance. Of course the resistance of a resistor can be defined by V/I, but when we talk about a given resistor it is typicaly the cause and the current the effect of the voltage across it. Similarly, the gain, radiation resistance, of a given metal dipole, or inductor/capacitor combination in space will not be determined by the voltage across or current through it.

True the fields surrounding it may cancel out the field in a large field around it. So you could contrive a scenario where a tiny LC resonator with lots of power cancels out (absorbs, if you will) the same incident wave a much larger dipole can. But this is not the same as an atom sucking in the field-space around it.

When the energy density, rates of change and field configurations are favorable for solitons, the Poynting vector of the soliton's field bends the Poynting vector of incident energy into the soliton, very similar to relativistic distortions. Now you might think I am agreeing with you (I guess I am) at this point, but the power density is such for particles and photons that I don't think you will be doing it short of microwave and kilojoule regimes. The fringe conspiracy stuff I read on Keely-net says the Russians need power plants to fire up their scalar toys ;-)

Scott

1409. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38B5D0FD.C5D4B6FC@agilent.com>
Source record: 63121

I've always heard it as a = the mean radius in inches, that is, the radius to the center of the wire. Assuming that's true, a = 1/16 + 0.016/2 = 0.0705 inches. b = 14*0.0159" = 0.2226" and the formula suggests L = 0.34uH when I run it on my calculator. I'm not sure why this disagrees so much with Luiz' result, but suspect a math error somewhere.

Some time ago, I did some comparisons of the simple formula Luiz posted with a supposedly very accurate formula, rather much more complicated, and found the differences exceeded 5% only with extreme ratios of a:b. Where a:b is between about 1:5 and 1:1, the differences were in the 1% range, IIRC. Even at very extreme ratios of a:b the differences were never as great as 10%. However, there are some things to be aware of:
--That's for just the coil, no leads
--It doesn't include the effects of shielding (which will lower the inductance) or core materials other than air
--It doesn't include the effects of distributed capacitance (which will be significant for closewound coils) which may make the effective inductance appear to be less (because it takes less external capacitance to resonate the coil).

Cheers,
Tom

py1ll@my-deja.com wrote:
>
> In article <88v3s9$qi9@news.dns.microsoft.com>,
> "Robert Fanfant" <fanfant@ix.netcom.com> wrote:
> > What would the inductance value be of 14 turns(tightly wound) 26 gauge
> solid
> > wire with an air core whose inside diameter is 1/8 of an inch.
> >
> > Thanks in advance,
> >
> > -rob
> >
> >
>
> It's around 2.1 uH or the result of:
>
> L(uH)= aï¿½nï¿½/(9a + 10b) where
>
> a = external coil radius (inches)
> b = coil length (inches)
> n = number of turns.

>
> This formula is valid for closewound coils and with b >= 0.8a.
> Please, recalculate it for security.
> (source: Radioamateur's Handbook, 1982)
> --
> Greetings,
>
> Luiz - PY1LL
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1410. Re: want to modify amp to work on 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Larry Gauthier <larryg_AT_ismi.net>
Message-ID: <38b5f0c0@news.ismi.net>
Source record: 63122

There is a ham out there who does conversions of SB0-220s and SB-200s to 6
and 2 meters. You might want to talk to him about it, or ask some advice.
bandswitch.

His e-mail address is: Carl KM1H@JUNO.COM

-larry
wb8bgo

<cboone@earthlink.net> wrote in message
news:38B5C7B6.4AE1678F@earthlink.net...
> Been done....the info on the SB200/220 was on the Heath remailer
> list a while back
>
> Chris
> WB5ITT
>
> Turboblown wrote:
> >
> > I am interested in modifying an old 10/11 meter amp or even an SB200/220
to
> > operate on the 6m band. Does anyone know how to do it or has anyone
done it
> > before?
> > Thanks

1411. Re: info abt SMPS needed..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Puppin <puppin@netpar.com.br>
Message-ID: <891tlbmkc1@nnrp1.deja.com>
Source record: 63188

In article <38B27A26.87370B03@qsl.net>,
nh7t@qsl.net wrote:
> hi all,
> I have to build a 50V/20A switching power supply. Although I already
> gathered some Apps, I would like to hear from you if you have
> experiences abt what parts to take (price, availability). I want to
run
> push - pull with fet's. The transistors are no problem, still looking
> for the driving device and the transformer core. Is there any site in
> the web describing such a project?
> tnx a lot!
> Rico
>
>
Hi Rico,
What about a full bridge instead a push-pull?
With a bridge the maximum voltage the Mosfets handle would be the input
peak voltage.
The energy in leakage inductance could be absorbed by the input
capacitor filter.
You don't need to use snubber circuits.
The transformer primary is easier to wind.
The push-pull tendency to unbalance can be avoided.
Of course there are some disadvantages. Four mosfets and more elaborated
driver.
I suggest you a voltage mode controller with a totem output that can be
found with application notes in Unitrode/Texas, Motorola,Philips,
National, and others.
73s
Puppin
--
Gilson Puppin - PU5MPL

Sent via Deja.com http://www.deja.com/
Before you buy.

1412. Niggling question about GG Linears

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <sXPVkYAEtHt4EwkI@g0wbf.freeserve.co.uk>
Source record: 63189

This has been niggling at me for a few days now and I can't think of an answer.

Why is it that in a GG linear using a directly heated filament valve there is no 50/60c/s mains hum superimposed on the signal?

--
Barry McCarthy

1413. FA parts / tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000223193803.01211.00000103@ng-fx1.aol.com>
Source record: 63190

FA
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264816544

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=267283922

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=265542601

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=265526219

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=265645427

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264824687

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264810176

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264801001

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264794651

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264788793

Thanks

1414. Re: Program a pic12c671 chip?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38B4B289.C021CA51@home.com>
Source record: 63191

If you have the code it isn't difficult at all. There is a schematic for a programmers in Mike Predko's book "PIC Microcontroller Handbook". You might find someone who would do it on the newsgroup "comp.arch.embedded".

Are you sure it isn't a 16C710, however?

A Jury wrote:

> Hi, I would like to build a audio field strength meter project I saw but
> it requires burning a pic12c671 chip. I havent been able to find any
> cheap burners that handle this chip. Can anyone point out a cheap
> burner I could use or is thier anyone that would burn 2 for me? Thanks,
> Art. kf7gd@arrl.net

1415. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8925ih$gl0$1@plutonium.btinternet.com>
Source record: 63192

> The amateur radio handbook has the formula for calculating air wound
coils.
==========
If he has the handbook or ready access to it, he wouldn't be asking
the question. In any case the handbook is not the bible. It has many
misleading errors.

The formula already given by someone else -

L = Square(n*a) / (9*a + 10 *b) microhenrys

is accurate enough, where n is the number of turns, a is the radius of
the winding (half distance between opposite wire centres), b is the
length of the winding (number of touching turns times wire diameter),
all in inches.

Reg.

1416. Re: Need Help w/mike ckt for Icom 735

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000223214405.01323.00000256@ng-fm1.aol.com>
Source record: 63193

to begin, the IC 735 uses an amplified mic, ,a standard mic will not have enough drive to modulate the rig, second the Icom mic is an electret mic which requires a plus dc voltage on the mic line to run the mic.. if you will place a cap about 1uf in series with your mic element you would be able to run it ,but it would be so low that it would be useless. best try to find an Icom mic..
w4pqw

1417. Re: homebrew qrp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-24 00:00:00 UTC
From: RobertLaporte <laporterobert@sympatico.ca>
Message-ID: <38B4A953.F8D9F178@sympatico.ca>
Source record: 63194

Go to Tentech QRP , on yahoo or altavista.
I''m getting one of them in march , they have a good reputation for selectivity , and everything comes in a kit with full instructions . You should not regret with this company..

Later BoB , VA2 BIK

Kd5fxt a écrit :

> I would like to build a homebrew qrp from "scratch"... any resources or info
> would be greatly appreciated. Pse email info.
>
> tnx
> Bill

1418. Re: Tank Q and Plate Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38B6D238.E47BD6A5@agilent.com>
Source record: 63045

I think the question comes down to, "what exactly does the 1A current rating mean?" I'd say that rating is for folk who look at DC meters, not ones that get into wondering what the circulating RF currents might be doing.

To begin with, the circulating tank current is mostly NOT going through the cathode; there is very little plate-to-cathode capacitance, given a grounded grid. Next: why maximum current ratings? Too much voltage causes arcing, x-rays, and the like; too much power causes melting. I can see that too much DC current emitted from the cathode can cause troubles for the emission surface. But we're talking about current in the plate here, and returned through the grid. Certainly a consideration might be the heating effects of the current on the grid: you don't want the grid to warp or to get so hot it starts having significant emission itself. So...though the circulating RF current is worth considering, I don't think the 1A DC tube rating is the right thing to be measuring it against.

Cheers,
Tom

Lawrence Stoskopf wrote:
>
> Just to straighten out my understanding of plate and tank currents:
>
> Suppose we have a tube rated at plate and cathode max current of 1 A. GG output
> capacity of 30 pF. Operating on 160M with an external tank Q of 10. Assume tank
> added capacity is 270 pF. (Just picking easy numbers) So when we drive the tube to
> a peak current of 1A, circulating current thru the added capacitor is 9A and 1A
> thru the tube cap. ? Tube can take that at max ratings.
>
> Now, lets move to 6 M and we can no longer use an external capacitor so we either
> just use the inductor tuned by the tube cap or do what is commonly done on 2M amps,
> feed in the B+ from a center tap in the inductor and add a series cap to the other
> end to mimic a push pull configuration. Circuit is more manageable.
>
> Instead of a parallel tuned circuit circulating 9 A outside the tube, we have a
> series circuit with the tube in the whole current loop (or is it a parallel circuit
> with the capacitor consisting of the tube and tuning cap in series ..resulting in
> roughly half the tube cap in most applications).
>
> In the latter case, if the Q is still 10, 10A are now flowing thru the tube and it
> is rated at 1A. In the former series case, with a Q of 10, the current has to be
> 1A and since we are feeding B+ to the inductor at the center, the current is fixed
> so the voltage developed is 10 X the B+, assuming the tube driven to full on and

> cutoff. With a 3 KV B+, 30 KV at the plate and good bye tube (unless you are using
> one of the pulse type tubes.).
>
> Obviously the bumble bee can't fly! Comments?
>
> Sorry for the length and probably obvious question. Took my Novice in the 50s when
> you had to draw schematics on the exam and my Extra in the 70s, so this is probably
> question #1 on the new exams.
>
> N0UU

1419. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38B6D37C.10E3027C@agilent.com>
Source record: 63046

Yesterday, I wrote:

> --It doesn't include the effects of distributed capacitance (which
> will be significant for closewound coils) which may make the
> effective inductance appear to be less (because it takes less
> external capacitance to resonate the coil).

I guess to make much sense, that should read, "appear to be more".
Duh.

Also, I should have said "a couple of percent" instead of "1 percent"
for a:b ratios near unity. Still, a couple percent should be adequate
almost all ham homebrew applications. If you need closer than that you
better plan a way to trim the inductance anyway.

Cheers,
Tom

1420. Re: 2M tube amplifier ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Ron <w8ron@stratos.net>
Message-ID: <38B6D60A.3E6633F1@stratos.net>
Source record: 63047

Hi SSparky.
Just a note on those microwawe HV transformers........They supersaturate the
core so run the primary at about 90 volts.

Ron

ssparky wrote:

> Try the VHF UHF Manual by G. R. Jessop G6JP fourth edition.
> it's ISBN 0 900612 92 4 printed in Great Britan, but can be found
> stateside. The tube schematics are great, but assumes you have experience
> building amps. It's not a "how to" book. I'm asking for help myself on
> building an amp using a pair of 4CX 250's. My problems are with building
> the HV supply. I'll be experimenting with transformers out of dead
> microwave ovens. It might save some serious money on transformers. If you
> come up with something else that better addresses construction please let me
> know. Thanks! mark KC7LTV ssparky2@thegrid.net remove one "S" in my
> e-mail address, like this: sparky2@...
> Martin Rask wrote in message <_q2m4.4347$jg4.6910@nntpserver.swip.net>...
> >Hello
> >I would like to get information on how to build a 2m tube amplifier with 2X
> >4CX250B or some other tubes
> >The amplifier should produce more than 500W on SSB
> >best regards Martin SM7VHS
> >
> >
> >
> >
> >

1421. Signal One

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Harold Johnson <w4zcb@cytechcis.net>
Message-ID: <xZAt4.53684$Cn1.1034251@news5.giganews.com>
Source record: 63048

And, someone was looking for a Plate choke for a CX-7. We lost contact and I'm getting tired of looking at this one on my desk. Someone, can you renew the converstaion preferably with an address?

W4ZCB

1422. Svetlana out of business????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: w4th@webtv.net
Message-ID: <19372-38B6E4EA-4@storefull-104.iap.bryant.webtv.net>
Source record: 63049

I heard a terrible rumor that Svetlana was going out of business. I was wondering if anyone else has heard this?
If anyone can shed some more light on this situation, please, let us hear from you.
73
Tom
W4TH

==========
Be sure to visit my web sites.

Amateur radio amp tubes.
http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html

Ham Radio Homepage.
http://www.geocities.com/Heartland/Woods/6222/

1423. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38B6EDC8.A926C040@bright.net>
Source record: 63050

I disagree...regens are NOT tricky and can be extremely sensitive and can be built selective enough to cut the sidebands off a signal. Search the net....some fine examples are out there and they are fun to build.
73
Paul

1424. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Cortland Richmond <Cortland.Richmond@usa.alcatel.com>
Message-ID: <38B6FAF9.3923897@usa.alcatel.com>
Source record: 63051
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

No, I'm not saying radio and light are different. Only that the absorption
of photons by atoms is limited to energy levels corresponding to states
their orbital electrons can occupy (the photoelectric effect).
Consequently, radio signals, unless of sufficiently high frequency specific
to the elements concerned, won't be absorbed in this way.

Actually, the above is incomplete. There IS an effect, in which atoms
subjected to a magnetic field will absorb radio waves of specific
frequencies at lower ranges, but this involves (I think) resonating with
the spin of protons in the nucleus. This is used in NMR imaging. I don't
know what frequency a "normal" earth magnetic field would resonate, but I
understand 70 MHz is typical for an NMR machine, with its much stronger
magnetic field.

Cortland
(ka5s@saber.net)

Science Hobbyist wrote:

> In article <38B5AE7C.477D51C5@usa.alcatel.com>,
> Cortland Richmond <Cortland.Richmond@usa.alcatel.com> wrote:
> > I understand that atom/photon interaction is a result of (or causes)
> > changes in the energy levels of the associated electrons. Since these
> energy
> > levels are quantized, such interactions may only occur at specific
> energy
> > levels, which explanation got Einstein the Nobel prize. However, we
> are
> > talking about photons of _light_ here, not radio.
>
> Does this mean you believe that light is fundamentally different
> than radio? :)
>
> The big question is this: when atoms absorb light, is the process
> at all similar to the way an electrically small resonant loop
> antenna absorbs radio waves? Well, electron shells of the atoms
> have big quanta, while the quantized states of a macroscopic
> metal antenna are incredibly small. That doesn't mean that atoms
> only use photons, while radio antennas only use waves. Wave/
> particle duality applies to both, and no matter how few photons
> are on the fly, they still form an extended electromagnetic
> waves. For this reason we can can talk about light absorbtion
> in terms of fields and resonance, rather than in terms of photons
> and electron states. The uniform size of an atom's energy

> states corresponds to the narrow bandwith of a resonant antenna.
> And the enhanced "effective area" of a loop antenna at
> resonance corresponds to the enhanced "photon collision
> cross-section" area of an atom when the photons have the same
> energy as the atom's internal electron transistions.
>
> > As far as I know, the
> > lowest frequencies at which atoms may absorb or emit energy in this
> manner
> > are in the microwave range, where the effect lets masers operate. Or
> used
> > to, until transistors got so good.
>
> Right. But look how small an ammonia molecule is when compared
> to the microwave wavelength. How can small atoms absorb more
> than the radiation incident upon them? The Bohren paper points
> out that the same question also applies to electrically-small
> resonant antennas. Because strong AC fields occur at
> resonance, small antennas can swell up in "size" until
> they resemble quarter-wave dipoles. If atoms behave in the same
> way, then at resonance an atom will cast a shadow which resembles
> the shadow of a quarter wave dipole, even though the atom is far,
> far smaller.
>
> I wonder how big a wavelength a molecule can absorb? Is the
> cutoff really up in the microwave band? If for some reason a
> molecule had a low-energy electron transition, then that
> molecule will be resonant at that low frequency, and will absorb
> waves having that wavelength, even if the wavelength
> is immensely larger than the diameter of the molecule. Since
> the resonant molecule can be physically much smaller than
> a quarter wavelength, in principle a single molecule could
> absorb AM radio or 60Hz radiation.
>
> Separate topic: I hear that head shields for cellphone users
> are selling for $50 a pop. On the one hand, maybe there's a
> physical mechanism whereby 900MHz radiation can affect
> chemical reactions. On the other hand, I bet somebody
> eventually starts selling "ferrite ointment" which you can
> slather on the side of your head to keep the nasty EMFs out of
> your brain!
>
> :)
>
> ((((((((((((((((((((((O)))))))))))))))))))))
> William J. Beaty SCIENCE HOBBYIST website
> billb@eskimo.com http://www.amasci.com
> EE/programmer/sci-exhibits science projects, tesla, weird science
> Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L
>

> Sent via Deja.com http://www.deja.com/
> Before you buy.

1425. ts-940 Shuts it self OFF!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: kb5yxu@cs.com
Message-ID: <20000225183122.22539.00001963@ng-cb1.news.cs.com>
Source record: 63052

Hello I have a TS-940 that cuts its self off. You have to open the unit and reset the micro to get it to come back on. It seems to happen while adjusting knobs on the front pannel like the rit. please email any sugestions to kb5yxu@cs.com

1426. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Richard Nielsen <rnielsen@uidaho.edu>
Message-ID: <8974pnmfi1@kestrel.csrv.uidaho.edu>
Source record: 63053

paulygman@my-deja.com wrote:
> I would like to build a simple receiver,1-3 tubes, not a kit. But first
> I need a good set of plans, perferably in the form of a magizine
> construction articile,like from an old popular electronics issue. Has
> anyone previously built one. Any advice would be helpful. I am
> searching for plans. I got a book from Lindsay on Building Your First
> Regenative Receiver and also looked at plans on the web called "One
> Compactron Reciever" Freinds say a regenetive reciever is tricky and
> not worth to build, but a heteradyne seems more complicated. Does
> anyone have first hand experience with building a simple reciever. Does
> anyone know of magazine articules on the subject. My county library
> here in New Jersey has loads of old popular electronics, 73 and QST,
> but no real index to construction articules.

I'm in the middle of building an FET version of a regenerative receiver. (See http://www.mines.uidaho.edu/~keng/sch/ which includes the Lindsay and several other regenerative receivers.)

I suspect they may indeed be tricky, based on the comments from my elmer. But he has offered to help check the sensitivity, etc., so I'm hopeful I can get it to work. I'll let you know.

You'll probably get more competent advice from the Glowbugs listserve. See http://www.qsl.net/n6ev/GBlist.html for instructions on how to subscribe.

--

Richard Nielsen, Dept. of Civil Engrg, Univ. of Idaho, Moscow ID 83844-1022
voice: 208-885-8961 fax: 208-885-6608

1427. Need HUMMM advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Ron H <rnharsh@visi.com>
Message-ID: <kKFt4.1664$%A3.36470@ptah.visi.com>
Source record: 63054
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

OBSERVATION
I am hearing a HUMmmm in my headphones when the rig is first keyed and on each key closure for three or four characters. I also noticed that the power output starts off a little higher and drops a few watts as the hum goes away.

QUESTION
Could this be a function of the capacitive power supply filter on the final plate supply? No choke, just caps.....

Should I be concerned???
73 K3PID

1428. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38B747D6.51CC@pop.removethistomailme.net>
Source record: 63055

```
Al, N2NKB wrote:
>
> maddog@io.com wrote in message <38b73f87.163474244@news.io.com>...
> >In recent conversations with EXIDE engineers, I was told the *safest*
> >thing to do to assure maximum battery life (when using sealed
> >lead-acid or gell-cells) is to charge with a 13.5- 13.8 Volt
> >regulated, current limited power supply, and to leave the battery
> >charging at all times (when not actually in use). This was their
> >reasoning:
> >
> >All sealed batteries have pressure vents seals in them. These are
> >one-time seals that vent-open if, for whatever reason, pressure builds
> >above a certain point in the battery. Usually, this happens as a
> >result of over-temperature or out-gassing. Over-temperature can be
> >caused by over-charging, or by failing to limit the charging current
> >to manufacturer's limits. Out-gassing, which is the creation of gases
> >in the electrolytic suspension at a rate faster than can be absorbed
> >by the battery chemistry, is usually caused by overcharging. In the
> >case of gell-cells, the point where outgassing begins to occur is when
> >the charging voltage exceeds 14.4 volts (+/-). Sometimes sealed
> >lead-acid cells are rated at 14.8 V, sometimes as low as 14.4
> >(according to manufacture). The end result is that once the pressure
> >vent is open, the electrolyte will dry. For gelled electrolyte, the
> >results can be radical reduction in performance and capacity in a
> >relatively short length of time (< 6 mos). For sealed lead acid, the
> >reduction might not be noticed for a year. The end result is that the
> >battery electrolyte becomes low or inneffective, and sulfation is
> >accelerated. For gelled and sealed lead-acid batteries, this amounts
> >to shortened life, and useless batteries.
> >
> >By using a fixed 13.5-13.8 Volt charging circuit with current
> >limiting, the battery never gets close to those breakdown conditions.
> >This doesn't mean it will last forever (after 3 years at room
> >temperature, a GOOD battery, properly maintained will probably only
> >have 40-50 % of it's original capacity). What do you give up by not
> >over-charging to 14.4 V, followed by a float charge? Very little. A
> >lead acid battery, charged at a fixed 13.8 volts, will probably have
> >95% of its rated capacity (overcharging brings it to 100%). Also, it
> >may take 15-25% longer for the battery to reach that 95% level, than
> >if you applied 14.4 V. Usually these factors are not problematic in
> >ham radio service.
> >
> >If you don't use current limiting, the current will be limited by the
> >battery effective charging resistance, which like all resistors
```

> >generates heat. Some manufacturers (though not many) claim to have
> >"self-limiting" charge currents. I'm sure there is a performance
> >trade-off for this feature, probably effective discharge resistance
> >(i.e., source impedance). Most expect the charge circuit to limit the
> >current. In almost all cases, the design limit for charge currents is
> >15-25% of battery capacity (typically, 20%). As an example, a 30
> >Amp-hour capacity battery should be limited to 30 x 20% = 6 Amps max.
> >Excess peak charge currents can also have the effect of mechanically
> >breaking the cell-to-cell connections inside the battery, which are
> >usually designed to be as small as possible for the rated service
> >currents, so as not to take much room inside the battery case.
> >
> >Sulfation is the major and most common cause of battery failure or
> >reduction in capacity. Even a properly maintained battery sulfates
> >gradually, and this is why the total capacity gradually decreases.
> >Several things can accelerate that process however, and one of them is
> >undercharged electrolyte. The increase in rate of sulfation is
> >significantly increased when battery voltage is allowed to discharge
> >below about 8-9 volts (for a 12 V battery), or if it is left below
> >about 11 Volts for any length of time (even days or weeks). I
> >recently had this experience with a brand new (two-month old) car
> >battery, when I left the dome light on during a 2-1/2 week vacation.
> >The battery discharged to about 2 volts, and never took a charge
> >again. So you'll get the longest life out of a battery by keeping it
> >charging at all times, when not actually drawing current from it, or
> >at least charging it immediately after discharge, and once-a-month or
> >so afterwards. This is often easy to do for ham radio applications.
> >(Don't apply this same philosophy to NiCads batteries)
> >
> >There have been some interesting devices that apply overcurrent pulses
> >to batteries to partially break down the sulfation. Some are quite
> >effective, some are wive's tales. I'm not sure how to sort them
> >out. One that I've NOT tried but appears may be effective in
> >reversing sulfation damage is built by Solartech:
> >
> >http://www.solartech.com/index2.htm
> >
> >That site also has a number of interesting papers about battery
> >chemistry, which you may also enjoy. In any case, most methods are
> >not "quick" (hours), and not particularly friendly to someone wanting
> >to use a communication receiver (hash noise).
> >
> >Hope this helps!
> >
> >73,
> >monty N5FC
>
> Sorry to quote this whole message NG readers-
> but nice read, Monty. "I've been there. Seen it happen" Thanks for sharing your post.
> Al

Likewise. Threads like this make me particularly frustrated at the encroachment of proprietary web-based message boards onto Usenet's territory.

Sometime within the next few years, I'll probably find myself surfing DejaNews looking for Monty's post and the others in this thread. If the thread had taken place on some random Web-based forum somewhere, the information would be completely out of reach.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1429. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Cortland Richmond <Cortland.Richmond@usa.alcatel.com>
Message-ID: <38B75B15.5468327B@usa.alcatel.com>
Source record: 63056
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Ah yes, the Amateur Scientist. I remember they once had a series on making
your own hgh-quality vacuums. Started with refrigerator compressors and went
through mercury pumps for a hard vacuum.

Interesting Web Page. Thanks!

Cortland
(ka5s@saber.net)

Science Hobbyist wrote:

> In article <38B6FAF9.3923897@usa.alcatel.com>,
> Cortland Richmond <Cortland.Richmond@usa.alcatel.com> wrote:
> > No, I'm not saying radio and light are different. Only that the
> absorption
> > of photons by atoms is limited to energy levels corresponding to
> states
> > their orbital electrons can occupy (the photoelectric effect).
> > Consequently, radio signals, unless of sufficiently high frequency
> specific
> > to the elements concerned, won't be absorbed in this way.
>
> We're in agreement. If a molecule for some reason had a low-
> energy state transition, it could receive radio waves, even
> though the "antenna" is the size of a molecule. The energy
> per photon would be extremely low. Maybe that's why we
> never hear about such things: if the energy per photon is
> far less than the energy stored in a chemical bond, then
> longwave EM wouldn't be able to break bonds directly, and
> radio waves wouldn't affect chemistry. This would only be
> true if there were no effects involving the absorbtion of
> multiple photons, or effects where a tiny nudge could have
> a big effect on a chemical reaction already under way.
>
> > Actually, the above is incomplete. There IS an effect, in which atoms
> > subjected to a magnetic field will absorb radio waves of specific
> > frequencies at lower ranges, but this involves (I think) resonating
> with
> > the spin of protons in the nucleus. This is used in NMR imaging. I
> don't
> > know what frequency a "normal" earth magnetic field would resonate,
>
> Proton precession magnetometers use the proton spin of the H
> in water molecules, and the frequency is around 2100Hz. This

> was in an old THE AMATEUR SCIENTIST project in SciAm, where a
> bottle of water with a coil around it produced a "ding" sound
> after amplification. This is a case where you can directly
> hear the resonant frequency of atoms, but it doesn't really
> correspond to photon absorbtion by electron shells.
>
> home-grown proton precession magnetometers
> http://www.portup.com/~dfount/proton.htm
>
> ((((((((((((((((((((((O)))))))))))))))))))))
> William J. Beaty SCIENCE HOBBYIST website
> billb@eskimo.com http://www.amasci.com
> EE/programmer/sci-exhibits science projects, tesla, weird science
> Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1430. Re: Midland 70-340B VHF 2m convertion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: cboone@earthlink.net
Message-ID: <38B5C6FD.51721606@earthlink.net>
Source record: 63123

I can program the EPROM as it sits on the plug in module!
If you wish, contact me in pvt email and I will discuss details
with you...did a lot of work on those radios back in the early
to mid 80s..

Chris
WB5ITT
(using Midland Syntech IIs and XTRs now :)

slug@aeminium.dhis.dee.uc.pt wrote:
>
> Hello,
> i have one of these radios a friend of mine gave me
> a couple of years ago and now i'm planning to convert it to 2m
> operation.
>
> I searched the net and found at
>
> http://www.morgan2.demon.co.uk/files.html
>
> a program called midland.zip which enables you to program the
> 27C16 EPROM of this radio. Does it work fine? I need to
> desolder the EPROM, that i'm planning to do it today, and
> searched the net for the radio IC's with not much luck...
>
> Any of you done the same? Tips, ideas, max channels allowed,
> frequency range, max power, etc are welcome! The radio
> schematic would be great, do you know were can i find it?
> I couldn't find the Midland HomePage!
>
> Thank you,
> Nuno Sucena
> --
> http://alumni.dee.uc.pt/~slug
> CT1FOX

1431. Re: Motorola Motrac repeater conversion???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: cboone@earthlink.net
Message-ID: <38B5C73C.861E95D6@earthlink.net>
Source record: 63124

Throw the Motrash Errr TRAC radios in the trash and buy some MICORs
or something solid state and less than 35 years old!

Chris
WB5ITT

> JJ wrote:
>
>
> Has anyone successfully converted any of the Motorola Motrac mobile
> radios into repeaters?? (sort of like converting a Micor)
>
> If so, please get in touch...I have three vhf mobiles that I would
> like to put to use and have not seen anything about converting them
> for repeater use.
>
> Any info on the Motrac line would be appreciated.
>
> Thanks in advance,
> JJ
>
>
> --
> http://www.buzzlink.com/pp/jjanddonna

1432. Re: want to modify amp to work on 6m

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: cboone@earthlink.net
Message-ID: <38B5C7B6.4AE1678F@earthlink.net>
Source record: 63125

Been done....the info on the SB200/220 was on the Heath remailer
list a while back

Chris
WB5ITT

Turboblown wrote:
>
> I am interested in modifying an old 10/11 meter amp or even an SB200/220 to
> operate on the 6m band. Does anyone know how to do it or has anyone done it
> before?
> Thanks

1433. WANTED

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: cboone@earthlink.net
Message-ID: <38B5C829.4DE0AC29@earthlink.net>
Source record: 63126
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.equipment

Looking for a Midland XTR or Syntech II 70-05xxA on 29-36 Mhz...
any power out will do...
PLEASE reply direct...NOT via the group!

Tnx
Chris
WB5ITT

1434. FS/FT: Mirage B108 80 watt - 2 GE Phoenix SX 16 Channel 30 watt

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38b5cd4e.4802366@news.thegrid.net>
Source record: 63127
Cross-posted to: rec.radio.swap,rec.radio.cb,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.vhf-uhf,alt.ham-radio.marketplace

For Sale or For Trade:

2 - GE Phoenix SX 16 Channel 30 watt VHF mobiles
1- Mirage 80 watt mobile amplifier

Go to my website for details...
http://www.qsl.net/kf6foz/main.htm

Thanks.
73 de kf6foz
The KF6FOZ BBS
Redding, CA.
530-229-0896

Visit my Website for other stuff and more info on
the BBS. Even a good list of Sale and Swap sites
on there.
http://www.qsl.net/kf6foz/main.htm

1435. Re: Rob Mills - Sonar FS-23 - lost your email address

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: SMITH29 <"smith29(not)"@home.com>
Message-ID: <38B5DA4C.6A430664@home.com>
Source record: 63128
Cross-posted to:
rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.cb

"Dean Hemphill, K5DH" wrote:
>
> Rob Mills... I bought the Sonar FS-23 from you a few weeks ago.
> If you're out there, please drop me a line. I lost your email
> address.
>
> 73,
> Dean, K5DH

xxx
Thought I was the only guy left that has a FS-23.
29

1436. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <894nj8pck1@nnrp1.deja.com>
Source record: 63129
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B5AE7C.477D51C5@usa.alcatel.com>,
Cortland Richmond <Cortland.Richmond@usa.alcatel.com> wrote:
> I understand that atom/photon interaction is a result of (or causes)
> changes in the energy levels of the associated electrons. Since these
energy
> levels are quantized, such interactions may only occur at specific
energy
> levels, which explanation got Einstein the Nobel prize. However, we
are
> talking about photons of _light_ here, not radio.

Does this mean you believe that light is fundamentally different
than radio? :)

The big question is this: when atoms absorb light, is the process
at all similar to the way an electrically small resonant loop
antenna absorbs radio waves? Well, electron shells of the atoms
have big quanta, while the quantized states of a macroscopic
metal antenna are incredibly small. That doesn't mean that atoms
only use photons, while radio antennas only use waves. Wave/
particle duality applies to both, and no matter how few photons
are on the fly, they still form an extended electromagnetic
waves. For this reason we can can talk about light absorbtion
in terms of fields and resonance, rather than in terms of photons
and electron states. The uniform size of an atom's energy
states corresponds to the narrow bandwith of a resonant antenna.
And the enhanced "effective area" of a loop antenna at
resonance corresponds to the enhanced "photon collision
cross-section" area of an atom when the photons have the same
energy as the atom's internal electron transistions.

> As far as I know, the
> lowest frequencies at which atoms may absorb or emit energy in this
manner
> are in the microwave range, where the effect lets masers operate. Or
used
> to, until transistors got so good.

Right. But look how small an ammonia molecule is when compared
to the microwave wavelength. How can small atoms absorb more
than the radiation incident upon them? The Bohren paper points
out that the same question also applies to electrically-small
resonant antennas. Because strong AC fields occur at
resonance, small antennas can swell up in "size" until

they resemble quarter-wave dipoles. If atoms behave in the same way, then at resonance an atom will cast a shadow which resembles the shadow of a quarter wave dipole, even though the atom is far, far smaller.

I wonder how big a wavelength a molecule can absorb? Is the cutoff really up in the microwave band? If for some reason a molecule had a low-energy electron transition, then that molecule will be resonant at that low frequency, and will absorb waves having that wavelength, even if the wavelength is immensely larger than the diameter of the molecule. Since the resonant molecule can be physically much smaller than a quarter wavelength, in principle a single molecule could absorb AM radio or 60Hz radiation.

Separate topic: I hear that head shields for cellphone users are selling for $50 a pop. On the one hand, maybe there's a physical mechanism whereby 900MHz radiation can affect chemical reactions. On the other hand, I bet somebody eventually starts selling "ferrite ointment" which you can slather on the side of your head to keep the nasty EMFs out of your brain!

:)

((((((((((((((((((((((O)))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

Sent via Deja.com http://www.deja.com/
Before you buy.

1437. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Murray Kelly <mkelly@powerup.com.au>
Message-ID: <38B5E665.FD18FFB4@powerup.com.au>
Source record: 63130

Er ... yes. I ran it thru my H/B basic program and came up
with approx 270nH. I was just about to tear it all apart! :-)
Then I saw this. Phew.

"E. Skelton" wrote:
>
> "Robert Fanfant" <fanfant@ix.netcom.com> wrote:
> >What would the inductance value be of 14 turns(tightly wound) 26 gauge solid
> >wire with an air core whose inside diameter is 1/8 of an inch.

SNIP

>about 0.26 microHenries.

> The W6GGV and G4FGQ programs both give a result of about
> 0.3 microHenries.
>
> 73, Ed. EI9GQ.
>--
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
* 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
* ph/fax Intl+ 61 7 3379 3307 *
****

1438. wtb: hookup wire...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Felton Mitchell <w4oa@vibroplex.com>
Message-ID: <38B61D09.82D91A5E@vibroplex.com>
Source record: 63131

hi... mitch here at vibroplex...

i need some hookup wire for a few projects... #24 & #26 with
very flexible insulation... as many colors as possible... let me
know what you have...

mitch, w4oa

--
-----------------The oldest name in ham radio-----------
Felton Mitchell, W4OA The Vibroplex Co., Inc.
w4oa@vibroplex.com 11 Midtown Park, E.
334-478-8873, FAX 334-476-0465 Mobile, AL 36606-4141
www.vibroplex.com USA

1439. wtb: greenlee punches...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Felton Mitchell <w4oa@vibroplex.com>
Message-ID: <38B61D51.531B0428@vibroplex.com>
Source record: 63132

i need a set of greenlee punches for the vibroplex bench...
what u got?

mitch, w4oa
--
-----------------The oldest name in ham radio------------
Felton Mitchell, W4OA The Vibroplex Co., Inc.
w4oa@vibroplex.com 11 Midtown Park, E.
334-478-8873, FAX 334-476-0465 Mobile, AL 36606-4141
www.vibroplex.com USA

1440. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38B643A9.AC2FB91B@nospam.gecm.com>
Source record: 63133
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Peter Lawton wrote:

> Alan Boswell wrote:
> >
>
> > Small resonant antennas can be very effective. If you have a lossless
> > small
> > antenna its receiving area is wavelength^2/4pi, no matter how small it is.
> > So at 1MHz even a tiny antenna has a capture area of about 700 square
> > metres.
>
> So does that mean that it has bigger shadow than one might expect?
> If you had two such antennas fairly close to each other, the one would
> decrease the signal available for the other?
>
> Peter Lawton

The shadowing effect is only noticed when they are very close. Their actual capture area is always much smaller than the theoretical figure because it is impossible to extract the available power since the optimum load impedance is impossible to achieve. Shadowing occurs when the mutual impedance between two antennas is of comparable magnitude to the self-impedance of either. For loopstick antennas the self-impedance is dominated by the large reactance, and the mutual impedance is small unless they are very close. There can be an effect when you put two radios close together.
Alan

1441. Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <895j1g$36v$1@SOLAIR2.EUnet.yu>
Source record: 63134
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1442. ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: VHF <walkie-talkie@europe.com>
Message-ID: <895j1e$367$2@SOLAIR2.EUnet.yu>
Source record: 63135
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Make an offer.

http://www.geocities.com/FashionAvenue/Runway/7439/f117.jpg

1443. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38B65B40.629A0D95@nospam.gecm.com>
Source record: 63136
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Tom Bruhns wrote:

> Science Hobbyist (William Beaty) wrote:
>
> > The same thing occurs with conventional radio waves and
> > electrically small dipole antennas if a large AC voltage is
> > impressed upon the antenna. The same thing occurs with small
> > loop antennas if they are given a large current. Actively
> > resonating antennas draw in far more energy than passive
> > pickup coils.
>
> Are you suggesting that such antennas are not linear systems?
>
> > In theory, a tiny loop antenna can behave as if it
> > were electrically enormous, and can reach out and intercept
> > huge amounts of energy.
>
> Do you have pointers to such theory?
>
> > At VLF frequencies, this effect
> > is significant. Nikola Tesla could have used this effect as part
> > of his "wireless power" scheme. It explains how even a tiny
> > antenna could intercept significant VLF wattage.
>
> I live a couple wavelengths from a VLF transmitting station that
> radiates about 500kW. Do you have an estimate of the useful energy I
> could expect to intercept ... with how tiny an antenna, and with what
> sort of practical configuration?
> >
> > And you thought "crossed-field antennas" were weird! What about
> > the loopstick inside an AM receiver?
>
> Are you proposing that they (loopsticks) might be any different than
> explained in the standard antenna reference books? It seems to me that
> those explanations predict the performance actually measured for such
> antennas.
>
> Cheers,
> Tom

Tom - assuming the station is on 17kHz you are 35km away, and with 500kW radiated you can expect the field intensity to be 190 millivolts per metre.

With a 10m-high monopole receiving antenna in your garden the open-circuit voltage will be about 0.9 volts. But - the source impedance for this voltage
will be about (0.0001 - j200000) ohms, which is determined by the radiation resistance and the capacitance of the antenna. If you can match perfectly to this
impedance the available power is 2kW. The catch is, it's impossible to provide
the right load impedance, so, practically, the extracted power is negligible.
Similar arguments apply to a loop antenna.
Alan

1444. FS 4CX800A MP final days

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: w4th@webtv.net
Message-ID: <19370-38B671AA-16@storefull-104.iap.bryant.webtv.net>
Source record: 63137

I am selling Svetlana Russian Military matched pairs of the 4CX800A tubes. This is a special purchase group of tubes, and there are very few of these matched pairs left. These tubes are nos, but carry my own 90 day warranty. These tubes have a green indicator strip on the side of each tube. These strips turn brown when the tubes are used. All of these tubes still have the green strip. When these are gone the price will go back to $125.00 per tube. I am selling these tubes as long as the supply last for $190.00 for a matched pair plus shipping. I will ship anywhere in the world. You can call me at 256-593-0164 or preferably just send me an email.
thanks for your time and 73
Tom Hix
W4TH

==========
Be sure to visit my web sites.

Amateur radio amp tubes.
http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html

Ham Radio Homepage.
http://www.geocities.com/Heartland/Woods/6222/

1445. Re: wtb: greenlee punches...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38B6A440.3EDC05B6@home.com>
Source record: 63138

There are always punches on EBay - they are under the "everything else",
tools, hand and search "Greenlee". A 1 1/8 punch went for about $26 a
few days ago. The "knockout set" goes for $50 to $60.

Jack
Felton Mitchell wrote:

> i need a set of greenlee punches for the vibroplex bench...
> what u got?
>
> mitch, w4oa
> --
> -----------------The oldest name in ham radio------------
> Felton Mitchell, W4OA The Vibroplex Co., Inc.
> w4oa@vibroplex.com 11 Midtown Park, E.
> 334-478-8873, FAX 334-476-0465 Mobile, AL 36606-4141
> www.vibroplex.com USA

1446. QST article needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: kb2ehj@intrex.net
Message-ID: <38b67e3d.4270430@news.intrex.net>
Source record: 63139

Hello,

I'm looking for an article that appeared in the December 1991 QST
that was about building a inexpensive deskmike.

If you have it I would greatly appriciate getting a photo copy
either mailed to me or if you have a scanner a scanned image
emailed to me.

I'm current in the call books and my email is as follows:

kb2ehj@intrex.net

73's

Mark
KB2EHJ
Durham, NC

1447. SN76514

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Harold Johnson <w4zcb@cytechcis.net>
Message-ID: <bOvt4.53235$Cn1.1019266@news5.giganews.com>
Source record: 63140

Looking for old stock on the above chip. Only need one, but would buy several if available. TI doesn't make it any more, the manufacturer of the rig it goes in doesn't have stock, name your own price.

W4ZCB

1448. Re: SN76514

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <38B690B1.9B84F55F@ix.netcom.com>
Source record: 63141

I've got one or two somewhere in the garage.....
If you don't get a better offer let me know and I'll start sending out
the search parties.....
73
Dan AC6AO G3NCR

1449. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: Richard Wilkes <rwilkes@gte.net>
Message-ID: <5lwt4.257$395.4385@dfiatx1-snr1.gtei.net>
Source record: 63142

Does anyone have any experience with the new version of Electronic Work
bench Ultiroute or Multisim?

The software is rather expensive but it appears to be very powerful package.
I am considering purchasing their student versions of Ultiroute and
Multisim. These programs are $100 each.

Rich
KE4BXZ

"Carl R. Stevenson" <wa6vse@fast.net> wrote in message
news:sahr7ace2pd91@corp.supernews.com...
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> "Michael D. Harmon" <mharmon@tranquility.net> wrote in message
> news:38A8D57B.DF4C7011@tranquility.net...
> > Ed,
> >
> > Check out the following site:
> >
> > http://www.ivex.com/
> >
> > They have a schematic capture (drafting) program called WinDraft and a
PCB
> > layout program called WinBoard which are free for download. The only
> catch
> > is that they are limited to 100 pins (each). You can buy additional pin
> > capacity if you need it.
>
> Better yet, checkout Eagle (from CadSoft) Light at
> http://www.cadsoftusa.com/freeware.htm
>
> Freeware
> The EAGLE 3.5 Light Edition can be used for free!
> Limitations
> The following limitations apply to the EAGLE Light Edition in general:
> The useable board area is limited to 100 x 80 mm (4 x 3.2 inches).
> Only two signal layers can be used (Top and Bottom).
> The schematic editor can only create one sheet.
> Apart from these three limitiations the EAGLE Light Edition can do
> anything the Professional Edition can do. You can even load, view
> and print drawings that exceed these limits!
> The Freeware version of EAGLE Light adds these limitations:
> Support is only available via email or through our forum (no fax

> or phone support).
> Use is limited to non-profit applications or evaluation purposes.
> What does "non-profit" mean?
> The definition of non-profit is fairly simple and straightforward:
> If you earn money by using the Freeware version of EAGLE Light,
> you have to register it.
> This allows anybody who wishes to use EAGLE Light for their
> private hobby projects to do so. Also students can use this version
> for any educational projects. It is even ok to use this version in a
> commercial environment, as long as you just want to evaluate the
> program. As soon as you start using it for commercial projects, you
> will have to register it.
>
> I am NOT affiliated with CadSoft in any way beyond being a
> satisfied customer for their professional version ...
>
>
> - --
> Carl R. Stevenson - wa6vse
> <mailto:wa6vse@fast/net>
> <http://www.users.fast.net/~wa6vse>
> - --
> NCI-1052
> Executive Director, No Code International
> Fellow, The Radio Club of America
> Senior Member, IEEE
> Member, TAPR
> Member, ARRL
> - --
> Join No Code International! Hams for the 21st Century.
> Help assure the survival and prosperity of ham radio.
> <http://www.nocode.org>
>
>
> -----BEGIN PGP SIGNATURE-----
> Version: PGP for Personal Privacy 5.5.3
>
> iQA/AwUBOKjs2pe+N6+q84HiEQLIwwCePGSQVb8xCgzuS/Fl3uvm5UzFwo0AoISd
> Xtm8ZwLOsfIqgzhuPdPfNo0J
> =CHN3
> -----END PGP SIGNATURE-----
>
>
>

1450. Re: Tank Q and Plate Current

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: stoskopf@tri.NET
Message-ID: <38B6A34D.1C9B5EEB@tri.net>
Source record: 63143

Just to straighten out my understanding of plate and tank currents:

Suppose we have a tube rated at plate and cathode max current of 1 A. GG output capacity of 30 pF. Operating on 160M with an external tank Q of 10. Assume tank added capacity is 270 pF. (Just picking easy numbers) So when we drive the tube to a peak current of 1A, circulating current thru the added capacitor is 9A and 1A thru the tube cap. ? Tube can take that at max ratings.

Now, lets move to 6 M and we can no longer use an external capacitor so we either just use the inductor tuned by the tube cap or do what is commonly done on 2M amps, feed in the B+ from a center tap in the inductor and add a series cap to the other end to mimic a push pull configuration. Circuit is more manageable.

Instead of a parallel tuned circuit circulating 9 A outside the tube, we have a series circuit with the tube in the whole current loop (or is it a parallel circuit with the capacitor consisting of the tube and tuning cap in series ..resulting in roughly half the tube cap in most applications).

In the latter case, if the Q is still 10, 10A are now flowing thru the tube and it is rated at 1A. In the former series case, with a Q of 10, the current has to be 1A and since we are feeding B+ to the inductor at the center, the current is fixed so the voltage developed is 10 X the B+, assuming the tube driven to full on and cutoff. With a 3 KV B+, 30 KV at the plate and good bye tube (unless you are using one of the pulse type tubes.).

Obviously the bumble bee can't fly! Comments?

Sorry for the length and probably obvious question. Took my Novice in the 50s when you had to draw schematics on the exam and my Extra in the 70s, so this is probably question #1 on the new exams.

N0UU

1451. Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-25 00:00:00 UTC
From: paulygman@my-deja.com
Message-ID: <896gic$1q4$1@nnrp1.deja.com>
Source record: 63144

I would like to build a simple receiver,1-3 tubes, not a kit. But first I need a good set of plans, perferably in the form of a magizine construction articile,like from an old popular electronics issue. Has anyone previously built one. Any advice would be helpful. I am searching for plans. I got a book from Lindsay on Building Your First Regenative Receiver and also looked at plans on the web called "One Compactron Reciever" Freinds say a regenetive reciever is tricky and not worth to build, but a heteradyne seems more complicated. Does anyone have first hand experience with building a simple reciever. Does anyone know of magazine articules on the subject. My county library here in New Jersey has loads of old popular electronics, 73 and QST, but no real index to construction articules.
Thanks
Paul G

Sent via Deja.com http://www.deja.com/
Before you buy.

1452. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38b743e2.537056@news.erols.com>
Source record: 63057

Paul: Sounds like you are a good candidate for the Mighty Midget Receiver Corps. Superhet. 3 6U8 tubes. Covers 80 and 40. SSB, CW and AM. You can do some short wave listening with it too. Check out the AM portion of my web site:

http://www.erols.com/wmeara

Good luck. Hang in there. The satisfaction that comes from listening to a homebrew rx more than makes up for the frustrations that you will encounter in the building process. And the frustrations are educational.

I think you are right to avoid regens, at least at first. I have great respect for regen builders, but I think that a simple, single conversion superhet is actually easier to get working properly.

73 Bill N2CQR

On Fri, 25 Feb 2000 18:10:24 GMT, paulygman@my-deja.com wrote:

>I would like to build a simple receiver,1-3 tubes, not a kit. But first
>I need a good set of plans, perferably in the form of a magizine
>construction articile,like from an old popular electronics issue. Has
>anyone previously built one. Any advice would be helpful. I am
>searching for plans. I got a book from Lindsay on Building Your First
>Regenative Receiver and also looked at plans on the web called "One
>Compactron Reciever" Freinds say a regenetive reciever is tricky and
>not worth to build, but a heteradyne seems more complicated. Does
>anyone have first hand experience with building a simple reciever. Does
>anyone know of magazine articules on the subject. My county library
>here in New Jersey has loads of old popular electronics, 73 and QST,
>but no real index to construction articules.
>Thanks
>Paul G
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

1453. Re: Signal One

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38b6eaf5.176012330@news.online.no>
Source record: 63058

On Fri, 25 Feb 2000 14:46:41 -0500, "Harold Johnson"
<w4zcb@cytechcis.net> wrote:

>And, someone was looking for a Plate choke for a CX-7. We lost contact and
>I'm getting tired of looking at this one on my desk. Someone, can you renew
>the converstaion preferably with an address?
>
>W4ZCB
>
>
Harold

wasn't me, but I am just curious, is circuit diagrams available on
some site? Is it a good rig, or just high priced as new? Only know
about one such rig in this country

73
Jan-Martin
LA8AK

1454. Re: SN76514

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38b6eba1.176184286@news.online.no>
Source record: 63059

On Fri, 25 Feb 2000 08:53:17 -0500, "Harold Johnson"
<w4zcb@cytechcis.net> wrote:

>Looking for old stock on the above chip. Only need one, but would buy
>several if available. TI doesn't make it any more, the manufacturer of the
>rig it goes in doesn't have stock, name your own price.
>
>W4ZCB
>
>
believe the replacement is TL442 (DIL), this may just as well be
obsolete now(?), W5DA mentioned this ic for product detector in R-4C

73
Jan-Martin
LA8AK

1455. OT: TEK 485 Scope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38B71C5D.F6A6FA47@lafn.org>
Source record: 63060

Hi,

My QRP homebrew favorite test gear has failed.

Last week, my TEK 485 scope suddenly began having wildly varying
brightness when started cold. Today, the scope won't start, panels
lamps are all off, and I hear only a slow "tick tick" sound.
Power Supply probably seeing a fault and shutting down repeatedly.

I am looking for a local place to repair,
local to San Fernando Valley, near Los Angeles.
Appreciate any recommendations.

Thank you for off topic bandwidth.
This scope is a GREAT piece of gear.
I am lost without my FAVORITE scope.
73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1456. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38B74162.2369A1A1@webaxs.net>
Source record: 63061
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

I also know a guy who extracted power to run lightbulbs etc from
a nearby am transmitter.

If you have a big resonant loop, and the voltage builds up, then
this also implies the *current* builds up.

Science Hobbyist wrote:
>
> In article <38B3BFE3.61FA556E@webaxs.net>,
> russell shaw <russell@webaxs.net> wrote:
> > At last, someone has stated what i figured 10 years ago!
> >
> > If the losses in a ferrite rod antenna are made very low,
> > the currents will become much higher, limited only by the
> > radiation resistance which is very low for around 1MHz.
> > The selectivity will also become sharper.
>
> When I first started jabbering about this last September,
> somebody mentioned that a massive loop antenna made from copper
> pipe can pick up significant energy. There's a guy in Chicago
> who runs little motors using high-Q resonant antennas (makes for
> a good perpetual motion hoax!) But if he had an AM tower within
> a few thousand meters, then that's not so impressive.
>
> What would be impressive is if a resonator could be persuaded to
> build up a high voltage rather than a high current. Maybe it
> would take the shape of a tesla coil secondary, but super-
> conductive. Even if it can intercept a fraction of a watt, a
> corona discharge at that wattage would be amazing.
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *

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* Australia *
****************************************
```

1457. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <897h2dogr1@nnrp1.deja.com>
Source record: 63062
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <9Mjt4.10475$84.334756@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:
>
> Science Hobbyist wrote in message <8948v1$d2i$1@nnrp1.deja.com>...
> >In article <k4gt4.10143$84.332786@elnws01>,
> > "Scott Stephens" <Scott2@Mediaone.net> wrote:
>
> >> Atoms are dynamic systems. A photon, with an impulse-like field,
>
> I mean a photon is not a sinusoid wave train...
>
> >For example a single photon can carry an entire 1MHz radio wave
> ...
> >and the Fourier spectrum of such a tiny pointlike field would be
broadband
> rather than single-frequency.)
>
> Of course, it doesn't oscillate long certainly, isn't the bandwidth
> inversely proportional to the pulse width?

Right, so if you have narrowband light such as laser light, it
means that each photon must be very long compared to the
wavelength. And each photon must be extremely wide if it's to
hit both telescopes of a small-baseline stellar interferometer.
(I hear that the photons from Beteleguse act like they're about
10 ft across!) I don't think you can stretch the "photon"
concept until the photons resemble electromagnetic waves, since
an EM wave really can be huge in extent, even for optical
frequencies.

> Yea, and an advance wave has to be emitted by the recieving atom to
travel
> backwards in time to the photon emitting atom, so it can emit the
photon,
> right? I hate that about QED.

I've heard these issues mentioned, but never heard about
the details. My math is fairly weak (being into digital,
rather than analog electronics!) :)

> >> It can only suck in as much flux as space will permit it, by
setting
> >up
> >> opposing currents and fields, according to electrodynamics.

>
> > Exactly. That's my point. The fields of the antenna act to suck
> > EM waves into the wire. In the example of the half-wave dipole
> > two things get missed:
> >
> > If we could make the fields very strong, even a much
> > smaller receiving antenna could "suck in" EM waves.
>
> No, you missed my point! Its not the field of the antenna, its the
> displacement currents, the reaction fields in space that prevents
more flux
> from flowing into the antenna. Poisson's equation.

Ah, I think I'm saying "flux" meaning energy flux, and you're
talking about e-field and b-field flux. You're right, the
resonant antenna doesn't suck in flux lines of e-fields or
b-fields. Instead it does some weird things to those fields
which end up sucking in Poynting-vector flux into the
antenna. A small, resonant antenna acts ANALOGOUS to iron or
ferroelectric, but it doesn't concentrate the field lines.
Instead it ends up concentrating the Poynting vector flux. It
does so by "sculpting" the e-fields and b-fields of the
incoming EM waves in order to direct the flow of energy
inwards towards the antenna.

> > The inductors and capacitors do the same thing that a thin
> > antenna wire does. A thin antenna wire acts like a broad sheet
> > of absorbtive material. It does so because the fields created
> > by the current and voltage of the wire cause EM energy to divert
> > from space and flow into the wire.
>
> I don't buy it. It is like your saying the voltage across or current
through
> a resistor determines its resistance. Of course the resistance of a
resistor
> can be defined by V/I, but when we talk about a given resistor it is
> typicaly the cause and the current the effect of the voltage across
it.

Yep, it's weird and counterintuitive. But it's not nonlinear.
It's like the example I gave with the capacitor: if you
charge a capacitor at a 1mA rate, with 1 volt across the
capacitor, then you're pumping in a millijoule of energy per
second into the capacitor. But if you let the voltage across
the capacitor rise to 2 volts, then you're pumping in 2mJ
per second. Suppose the capacitor is being charged by a 100
volt power supply with a 100k resistor in series. The higher
you let the capacitor voltage rise, the higher grows the energy
flow into the capacitor. In the case of small resonant
antennas, if we let the AC fields around the antenna build
up to a high level, then the antenna gathers energy at a higher

and higher rate, but only until the surrounding fields start
to affect the "power supply" and prevent further gains in
power reception. This occurs when the fields generated by
the antenna become significant at 1/4 wavelength, and the
antenna starts radiating as much as it absorbs.

> Similarly, the gain, radiation resistance, of a given metal dipole, or
> inductor/capacitor combination in space will not be determined by the
> voltage across or current through it.
> True the fields surrounding it may cancel out the field in a large
field
> around it. So you could contrive a scenario where a tiny LC resonator
with
> lots of power cancels out (absorbs, if you will) the same incident
wave a
> much larger dipole can.

Right. Electrically small antennas can "act large" if they're
tuned to resonance, and the effect occurs only if the AC
fields generated by the antenna are synchronized to the fields
of the incoming waves. But the antenna's fields are created by
the voltage and current in the coil/capacitor, so it forces me to
say that the voltage and current causes the effective size of
the antenna to be much larger than the physical size, but ONLY if
the voltage and current waveforms are locked in phase to those of
the incoming waves. This occurs naturally in a resonant
circuit, so we don't have to artifically drive a coil with a
power supply in order to see the "energy sucking" effect (but
we could do so if we wanted to.)

> But this is not the same as an atom sucking in the
> field-space around it.

Why not? That C. Bohren paper points out that a tiny metal
particle does "suck energy" from the surrounding space because
the surface plasmons are resonant with the incoming waves.
If the same applies to individual atoms, then when an EM wave
hits an atom, and one of the electron clouds is resonant at
that frequency, then the electron cloud starts sloshing more
and more, which creates a larger and larger AC field around the
atom, which diverts more and more wave-energy towards the
atom... until the electron suddenly changes state. This
doesn't explain most of QM, but it does explain how a 0.1nM atom
can strongly interact with 600nM radiation, as if the diameter
of the atom was a quarter wavelength across instead of hundreds
of times smaller.

>
> When the energy density, rates of change and field configurations are
> favorable for solitons, the Poynting vector of the soliton's field
bends the
> Poynting vector of incident energy into the soliton, very similar to

> relativistic distortions. Now you might think I am agreeing with you
(I
> guess I am) at this point, but the power density is such for
particles and
> photons that I don't think you will be doing it short of microwave and
> kilojoule regimes. The fringe conspiracy stuff I read on Keely-net
says the
> Russians need power plants to fire up their scalar toys ;-)

If this happens, it means that the fields must be intense enough
to make space go nonlinear. (Don't solitons only travel in
a nonlinear medium?) If the vacuum is nonlinear at high
field strengths, then you can probably make atoms out of
collapsing hunks of EM radiation.

Small resonant antennas are "nonlinear" only in the sense that
an incoming EM wave sees all matter as a nonlinearity in space.
If the hunk of matter happens to be a resonant circuit, it acts
even more "nonlinear" than the surrounding matter.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1458. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <897i47$p99$1@nnrp1.deja.com>
Source record: 63063
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B6FAF9.3923897@usa.alcatel.com>,
Cortland Richmond <Cortland.Richmond@usa.alcatel.com> wrote:
> No, I'm not saying radio and light are different. Only that the
absorption
> of photons by atoms is limited to energy levels corresponding to
states
> their orbital electrons can occupy (the photoelectric effect).
> Consequently, radio signals, unless of sufficiently high frequency
specific
> to the elements concerned, won't be absorbed in this way.

We're in agreement. If a molecule for some reason had a low-
energy state transition, it could receive radio waves, even
though the "antenna" is the size of a molecule. The energy
per photon would be extremely low. Maybe that's why we
never hear about such things: if the energy per photon is
far less than the energy stored in a chemical bond, then
longwave EM wouldn't be able to break bonds directly, and
radio waves wouldn't affect chemistry. This would only be
true if there were no effects involving the absorbtion of
multiple photons, or effects where a tiny nudge could have
a big effect on a chemical reaction already under way.

> Actually, the above is incomplete. There IS an effect, in which atoms
> subjected to a magnetic field will absorb radio waves of specific
> frequencies at lower ranges, but this involves (I think) resonating
with
> the spin of protons in the nucleus. This is used in NMR imaging. I
don't
> know what frequency a "normal" earth magnetic field would resonate,

Proton precession magnetometers use the proton spin of the H
in water molecules, and the frequency is around 2100Hz. This
was in an old THE AMATEUR SCIENTIST project in SciAm, where a
bottle of water with a coil around it produced a "ding" sound
after amplification. This is a case where you can directly
hear the resonant frequency of atoms, but it doesn't really
correspond to photon absorbtion by electron shells.

home-grown proton precession magnetometers
http://www.portup.com/~dfount/proton.htm

(((((((((((((((((((((O)))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com

EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

Sent via Deja.com http://www.deja.com/
Before you buy.

1459. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38B749C2.1FF49D66@webaxs.net>
Source record: 63064
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

I've done it, sought of. I wound about 14 turns on a cardboard box
and connected to a 415pF tuning cap, so it resonated 600-1600kHz.

Now put a ferrite rod tranny in the box, tuned to a weak station.
Now adjust the box tuning cap to resonate the big coil. Your station
will increase by 20-40dB ! (Hint: orient the box coil in the right
direction, and use thickish automotive wire for the coil).

By connecting an OA91 diode, resistor, and crystal earphone, i could
get 5 sharply tuned stations without needing an external antenna or
earth.

Science Hobbyist wrote:
>
> In article <38B56653.3A44@virgin.net>,
> peter_john.lawton@virgin.net wrote:
> > Alan Boswell wrote:
> > >
> >
> > So does that mean that it has bigger shadow than one might expect?
> > If you had two such antennas fairly close to each other, the one would
> > decrease the signal available for the other?
>
> AM loopstick antennas supposedly do just this.
>
> I don't have two AM portable radios here, but I've heard that if
> you receive a weak station with one radio, then you tune
> a nearby *unpowered* radio to the same frequency, the unpowered
> radio can steal some of the signal. That's the shadow effect.
> Even when the power is off, there's still a tuning capacitor
> connected across the loopstick. (The AGC in the radios will
> probably hide this effect if strong stations are used.)
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

--
****

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

1460. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: maddog@io.com
Message-ID: <38b73f87.163474244@news.io.com>
Source record: 63065

In recent conversations with EXIDE engineers, I was told the *safest* thing to do to assure maximum battery life (when using sealed lead-acid or gell-cells) is to charge with a 13.5- 13.8 Volt regulated, current limited power supply, and to leave the battery charging at all times (when not actually in use). This was their reasoning:

All sealed batteries have pressure vents seals in them. These are one-time seals that vent-open if, for whatever reason, pressure builds above a certain point in the battery. Usually, this happens as a result of over-temperature or out-gassing. Over-temperature can be caused by over-charging, or by failing to limit the charging current to manufacturer's limits. Out-gassing, which is the creation of gases in the electrolytic suspension at a rate faster than can be absorbed by the battery chemistry, is usually caused by overcharging. In the case of gell-cells, the point where outgassing begins to occur is when the charging voltage exceeds 14.4 volts (+/-). Sometimes sealed lead-acid cells are rated at 14.8 V, sometimes as low as 14.4 (according to manufacture). The end result is that once the pressure vent is open, the electrolyte will dry. For gelled electrolyte, the results can be radical reduction in performance and capacity in a relatively short length of time (< 6 mos). For sealed lead acid, the reduction might not be noticed for a year. The end result is that the battery electrolyte becomes low or inneffective, and sulfation is accelerated. For gelled and sealed lead-acid batteries, this amounts to shortened life, and useless batteries.

By using a fixed 13.5-13.8 Volt charging circuit with current limiting, the battery never gets close to those breakdown conditions. This doesn't mean it will last forever (after 3 years at room temperature, a GOOD battery, properly maintained will probably only have 40-50 % of it's original capacity). What do you give up by not over-charging to 14.4 V, followed by a float charge? Very little. A lead acid battery, charged at a fixed 13.8 volts, will probably have 95% of its rated capacity (overcharging brings it to 100%). Also, it may take 15-25% longer for the battery to reach that 95% level, than if you applied 14.4 V. Usually these factors are not problematic in ham radio service.

If you don't use current limiting, the current will be limited by the battery effective charging resistance, which like all resistors generates heat. Some manufacturers (though not many) claim to have "self-limiting" charge currents. I'm sure there is a performance trade-off for this feature, probably effective discharge resistance (i.e., source impedance). Most expect the charge circuit to limit the

current. In almost all cases, the design limit for charge currents is 15-25% of battery capacity (typically, 20%). As an example, a 30 Amp-hour capacity battery should be limited to 30 x 20% = 6 Amps max. Excess peak charge currents can also have the effect of mechanically breaking the cell-to-cell connections inside the battery, which are usually designed to be as small as possible for the rated service currents, so as not to take much room inside the battery case.

Sulfation is the major and most common cause of battery failure or reduction in capacity. Even a properly maintained battery sulfates gradually, and this is why the total capacity gradually decreases. Several things can accelerate that process however, and one of them is undercharged electrolyte. The increase in rate of sulfation is significantly increased when battery voltage is allowed to discharge below about 8-9 volts (for a 12 V battery), or if it is left below about 11 Volts for any length of time (even days or weeks). I recently had this experience with a brand new (two-month old) car battery, when I left the dome light on during a 2-1/2 week vacation. The battery discharged to about 2 volts, and never took a charge again. So you'll get the longest life out of a battery by keeping it charging at all times, when not actually drawing current from it, or at least charging it immediately after discharge, and once-a-month or so afterwards. This is often easy to do for ham radio applications. (Don't apply this same philosophy to NiCads batteries)

There have been some interesting devices that apply overcurrent pulses to batteries to partially break down the sulfation. Some are quite effective, some are wive's tales. I'm not sure how to sort them out. One that I've NOT tried but appears may be effective in reversing sulfation damage is built by Solartech:

http://www.solartech.com/index2.htm

That site also has a number of interesting papers about battery chemistry, which you may also enjoy. In any case, most methods are not "quick" (hours), and not particularly friendly to someone wanting to use a communication receiver (hash noise).

Hope this helps!

73,
monty N5FC

1461. Re: Car batteries; and the charging of

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <galt4.6160$YG.437697@bgtnsc04-news.ops.worldnet.att.net>
Source record: 63066

maddog@io.com wrote in message <38b73f87.163474244@news.io.com>...
>In recent conversations with EXIDE engineers, I was told the *safest*
>thing to do to assure maximum battery life (when using sealed
>lead-acid or gell-cells) is to charge with a 13.5- 13.8 Volt
>regulated, current limited power supply, and to leave the battery
>charging at all times (when not actually in use). This was their
>reasoning:
>
>All sealed batteries have pressure vents seals in them. These are
>one-time seals that vent-open if, for whatever reason, pressure builds
>above a certain point in the battery. Usually, this happens as a
>result of over-temperature or out-gassing. Over-temperature can be
>caused by over-charging, or by failing to limit the charging current
>to manufacturer's limits. Out-gassing, which is the creation of gases
>in the electrolytic suspension at a rate faster than can be absorbed
>by the battery chemistry, is usually caused by overcharging. In the
>case of gell-cells, the point where outgassing begins to occur is when
>the charging voltage exceeds 14.4 volts (+/-). Sometimes sealed
>lead-acid cells are rated at 14.8 V, sometimes as low as 14.4
>(according to manufacture). The end result is that once the pressure
>vent is open, the electrolyte will dry. For gelled electrolyte, the
>results can be radical reduction in performance and capacity in a
>relatively short length of time (< 6 mos). For sealed lead acid, the
>reduction might not be noticed for a year. The end result is that the
>battery electrolyte becomes low or inneffective, and sulfation is
>accelerated. For gelled and sealed lead-acid batteries, this amounts
>to shortened life, and useless batteries.
>
>By using a fixed 13.5-13.8 Volt charging circuit with current
>limiting, the battery never gets close to those breakdown conditions.
>This doesn't mean it will last forever (after 3 years at room
>temperature, a GOOD battery, properly maintained will probably only
>have 40-50 % of it's original capacity). What do you give up by not
>over-charging to 14.4 V, followed by a float charge? Very little. A
>lead acid battery, charged at a fixed 13.8 volts, will probably have
>95% of its rated capacity (overcharging brings it to 100%). Also, it
>may take 15-25% longer for the battery to reach that 95% level, than
>if you applied 14.4 V. Usually these factors are not problematic in
>ham radio service.
>
>If you don't use current limiting, the current will be limited by the
>battery effective charging resistance, which like all resistors
>generates heat. Some manufacturers (though not many) claim to have
>"self-limiting" charge currents. I'm sure there is a performance

>trade-off for this feature, probably effective discharge resistance
>(i.e., source impedance). Most expect the charge circuit to limit the
>current. In almost all cases, the design limit for charge currents is
>15-25% of battery capacity (typically, 20%). As an example, a 30
>Amp-hour capacity battery should be limited to 30 x 20% = 6 Amps max.
>Excess peak charge currents can also have the effect of mechanically
>breaking the cell-to-cell connections inside the battery, which are
>usually designed to be as small as possible for the rated service
>currents, so as not to take much room inside the battery case.
>
>Sulfation is the major and most common cause of battery failure or
>reduction in capacity. Even a properly maintained battery sulfates
>gradually, and this is why the total capacity gradually decreases.
>Several things can accelerate that process however, and one of them is
>undercharged electrolyte. The increase in rate of sulfation is
>significantly increased when battery voltage is allowed to discharge
>below about 8-9 volts (for a 12 V battery), or if it is left below
>about 11 Volts for any length of time (even days or weeks). I
>recently had this experience with a brand new (two-month old) car
>battery, when I left the dome light on during a 2-1/2 week vacation.
>The battery discharged to about 2 volts, and never took a charge
>again. So you'll get the longest life out of a battery by keeping it
>charging at all times, when not actually drawing current from it, or
>at least charging it immediately after discharge, and once-a-month or
>so afterwards. This is often easy to do for ham radio applications.
>(Don't apply this same philosophy to NiCads batteries)
>
>There have been some interesting devices that apply overcurrent pulses
>to batteries to partially break down the sulfation. Some are quite
>effective, some are wive's tales. I'm not sure how to sort them
>out. One that I've NOT tried but appears may be effective in
>reversing sulfation damage is built by Solartech:
>
>http://www.solartech.com/index2.htm
>
>That site also has a number of interesting papers about battery
>chemistry, which you may also enjoy. In any case, most methods are
>not "quick" (hours), and not particularly friendly to someone wanting
>to use a communication receiver (hash noise).
>
>Hope this helps!
>
>73,
>monty N5FC

Sorry to quote this whole message NG readers-
but nice read, Monty. "I've been there. Seen it happen" Thanks for sharing your post.
Al

1462. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <G3Kt4.11741$84.356258@elnws01>
Source record: 63067
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <897h2dogr1@nnrp1.deja.com>...
>In article <9Mjt4.10475$84.334756@elnws01>,
> "Scott Stephens" <Scott2@Mediaone.net> wrote:
>>
>> Science Hobbyist wrote in message <8948v1$d2i$1@nnrp1.deja.com>...
>> >In article <k4gt4.10143$84.332786@elnws01>,
>> > "Scott Stephens" <Scott2@Mediaone.net> wrote:

> Right, so if you have narrowband light such as laser light, it
> means that each photon must be very long compared to the
> wavelength.

Frequency is statistical, an average of many events over time. A photon is a particle, an individual instance. Better to specify its energy. Solitons have a width, roughly equivalent to frequency.

> And each photon must be extremely wide if it's to
> hit both telescopes of a small-baseline stellar interferometer.

I don't buy it. I think there are lots of soliton-photons being emitted by atoms in the distant star that scatter, interfere with each other. Next you will protest that the double-slit experiment proves that a single photon must travel through both slits. But consider the vacuum or aether as a transmission line or multi-mode waveguide supporting solitons. If you affect one of the paths, you actualy detune the transmission line, and affect the source and paths for coherent soliton or wave emissions. So you can account for spooky QED stuff like tunneling, entanglement and Hiesenburg exclusion with solitons, or more properly a vacuum or aether.

>> Yea, and an advance wave has to be emitted by the recieving atom to
>travel
>> backwards in time to the photon emitting atom, so it can emit the
>photon,
>> right? I hate that about QED.
>
> I've heard these issues mentioned, but never heard about
> the details. My math is fairly weak (being into digital,
> rather than analog electronics!) :)

An interesting explanation is at http://chaos.fullerton.edu/~jimw/general/inertia/index.html 3/4 of the page down. Not that I'm a true believer of transient mass fluctuations, but the LANL paper "9902008 The energy conservation law in classical electrodynamics" and CSS point out some problems with the Standard Model. It is also mentioned in (IIRC) in the Relativity FAQ. It has to do with the

finite propagation speed of the Lorentz force, and gravity has a similar problem. Gravity and EM force points at where the attractor was, not is, so orbits can decay, and EM solutions blow up. By adding dynamic reaction forces, the systems stabilize and don't decay. But at relativistic energies, particle self-energies change making for some very difficult, chaotic and questionable predictions by the Standard Model.

>> > If we could make the fields very strong, even a much
>> > smaller receiving antenna could "suck in" EM waves.

> A small, resonant antenna acts ANALOGOUS to iron or
> ferroelectric, but it doesn't concentrate the field lines.
> Instead it ends up concentrating the Poynting vector flux. It
> does so by "sculpting" the e-fields and b-fields of the
> incoming EM waves in order to direct the flow of energy
> inwards towards the antenna.

> Yep, it's weird and counterintuitive. But it's not nonlinear.
> It's like the example I gave with the capacitor: if you
> charge a capacitor at a 1mA rate, with 1 volt across the
> capacitor,

That would require a current source composed of a dynamic, nonlinear, resistance.

> then you're pumping in a millijoule of energy per
> second into the capacitor.

The current source to charge that capacitor might have used 1 volt, but you failed to spec the capacitor which I must assume was constant, as E=1/2 CV^2. Now if C is constant, and the voltage is constant, the energy is constant too.

> But if you let the voltage across
> the capacitor rise to 2 volts, then you're pumping in 2mJ
> per second.

You must be talking about a capacitor that is dynamicaly changing capacitance, that is nonlinear, because you keep a constant voltage across a capacitor as you increase the stored energy at a linear rate.

> In the case of small resonant
> antennas, if we let the AC fields around the antenna build
> up to a high level, then the antenna gathers energy at a higher
> and higher rate, but only until the surrounding fields start
> to affect the "power supply" and prevent further gains in
> power reception.

Now we're talking about a different situation, with an LC and sinusoid. The LC will 'ring up', initialy presenting a greater load to a source delivering a constant voltage. Now I see what you mean, I think. You mean that the power extracted from the incident field is dependant on the energy in the LC tank. Considering a sinusoidal field potential, and a sinusoidal tank

voltage of equal value, there be no energy or complete energy extracted
depending on relative phases, of 0 or 180 degrees respectively. OK.

This has nothing to do with "concentrating the Poynting vector
flux..."sculpting" the e-fields and b-fields of the
incoming EM waves in order to direct the flow of energy inwards towards the
antenna." Or, IMHO what goes on with atoms and photons. Your arguement
involve changing the potential difference across circuit elements. I think
what happens with atoms and photons is a changing of the properties of the
vacuum, a warping of space-time for the EM poynting vector and dynamic E and
B fields.

> But the antenna's fields are created by
> the voltage and current in the coil/capacitor, so it forces me to
> say that the voltage and current causes the effective size of
> the antenna to be much larger than the physical size, but ONLY if
> the voltage and current waveforms are locked in phase to those of
> the incoming waves.

Right, ok.

> This occurs naturally in a resonant
> circuit, so we don't have to artifically drive a coil with a
> power supply in order to see the "energy sucking" effect (but
> we could do so if we wanted to.)

I don't think so. If you don't criticaly damp, that is conjugate match,
absorb all the energy from the LC antenna, it
will not cancel the field as you think. If you let it ring up to the
incident field potential and cease to absorb power. How do you get a 180
degree phase shift field without constantly supplying the energy to do it,
and then radiating away that energy? It sounds like your talking about
active signal cancellation. What wonderfull stealth that trick would make!

>> But this is not the same as an atom sucking in the
>> field-space around it.
>
> Why not?
...
> If the same applies to individual atoms, then when an EM wave
> hits an atom, and one of the electron clouds is resonant at
> that frequency, then the electron cloud starts sloshing more
> and more,

A photon field has that many cycles?

> which creates a larger and larger AC field around the
> atom, which diverts more and more wave-energy towards the
> atom... until the electron suddenly changes state.

Consider an electron with its relatively powerfull magnetic and electric
potential, and its wavefunction. An incident photon impulse causes it to
ride the wave, and if the (DeBroglie?) wavelength is in phase, it gets stuck

in a new orbit, otherwise it falls. As the electron moves, it actively cancels the incident field with its powerfull potential, and stores it in the potential energy of its orbit (or resonance). Or consider a Lucas ring electron vibrating lines of flux around between the nucleous and its neighbor electrons. Not quite as simple as the classical case, but I think more realistic.

>> When the energy density, rates of change and field configurations are
>> favorable for solitons, the Poynting vector of the soliton's field
>bends the
>> Poynting vector of incident energy into the soliton, very similar to
>> relativistic distortions. Now you might think I am agreeing with you
>(I
>> guess I am) at this point, but the power density is such for
>particles and
>> photons that I don't think you will be doing it short of microwave and
>> kilojoule regimes. The fringe conspiracy stuff I read on Keely-net
>says the
>> Russians need power plants to fire up their scalar toys ;-)

> If this happens, it means that the fields must be intense enough
> to make space go nonlinear. (Don't solitons only travel in
> a nonlinear medium?)

Yes, sort of. Nonlinear as in changing Mu0 or E0, as ferromagnetic and ferroelectric ceramics do near saturation, no. You would see lasers intermodulating and frequency dispersion and stuff. The nonlinearity I'm talking about is like the nonlinearity of the Lorentz transform in Special Relativity, where fields are bent and distorted, as energy (Poynting vector) changes from dispersing as transverse waves in 3d space to higher dimensional longitudinal waves, which in turn can warp the transverse waves. Energy knots can form. Fast rates of change are required, as we don't see EM solitons short of Maser emissions (that I'm aware of).

> If the vacuum is nonlinear at high
> field strengths, then you can probably make atoms out of
> collapsing hunks of EM radiation.

Yep. Ever year of Beamstraalung (not bremstraalung, breaking radiation)? Intense particle beams can shear the vacuum, spawing particles like the turbulence in fluid wake.

> Small resonant antennas are "nonlinear" only in the sense that
> an incoming EM wave sees all matter as a nonlinearity in space.
> If the hunk of matter happens to be a resonant circuit, it acts
> even more "nonlinear" than the surrounding matter.

I think you are confusing the transient (or forced) response of a linear, LC circuit with different phenomena with atoms.

Scott

1463. Re: Need HUMMM advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38b72bf6.192656053@news.online.no>
Source record: 63068
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Fri, 25 Feb 2000 19:11:02 -0600, "Ron H" <rnharsh@visi.com> wrote:

>OBSERVATION
>I am hearing a HUMmmm in my headphones when the rig is first keyed and on
>each key closure for three or four characters. I also noticed that the power
>output starts off a little higher and drops a few watts as the hum goes
>away.
>
>QUESTION
>Could this be a function of the capacitive power supply filter on the final
>plate supply? No choke, just caps.....
>
>Should I be concerned???
> 73 K3PID
>
>
it is possibly caused by a stage which needs time to mute, but
difficult to say when one doesnt know which rig you use

73 jan-martin
LA8AK

1464. Re: Svetlana out of business????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <898dhravd1@nnrp1.deja.com>
Source record: 63069

In article <19372-38B6E4EA-4@storefull-104.iap.bryant.webtv.net>,
w4th@webtv.net (Tom Hix W4TH) wrote:
> I heard a terrible rumor that Svetlana was going out of business. I
was
> wondering if anyone else has heard this?
> If anyone can shed some more light on this situation, please, let us
> hear from you.
> 73
> Tom
> W4TH
>
> ==========
> Be sure to visit my web sites.
>
> Amateur radio amp tubes.
> http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html
>
> Ham Radio Homepage.
> http://www.geocities.com/Heartland/Woods/6222/
>
>

Its homepage is fully active at http://www.svetlana.com/ and nothing
about that is found on there.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1465. Re: Need HUMMM advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <898e1t$b8h$1@nnrp1.deja.com>
Source record: 63070
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <kKFt4.1664$%A3.36470@ptah.visi.com>,
"Ron H" <rnharsh@visi.com> wrote:
> OBSERVATION
> I am hearing a HUMmmm in my headphones when the rig is first keyed and
on
> each key closure for three or four characters. I also noticed that the
power
> output starts off a little higher and drops a few watts as the hum
goes
> away.
>
> QUESTION
> Could this be a function of the capacitive power supply filter on the
final
> plate supply? No choke, just caps.....
>
> Should I be concerned???
> 73 K3PID
>
>
As the output power is higher during the hum, it is possible that the
power supply filtering is not being enough for this big power. As it
diminishes filter becomes good.
I'd suggest you to investigate the RF power circuits to see why this
power increase occurs. You haven't told whether it is a tube or
transistor rig but to measure the bias circuit to see whether it shows
any change during the problem is a good idea , I think.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1466. Ft 890 & cw fault ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: digi <dave@omens.freeserve.co.uk>
Message-ID: <898cvv$d5f$1@news8.svr.pol.co.uk>
Source record: 63071

Hi ,
I have a fault on my ft890 in cw mode,it
will only tx about 25 milliwatts or so ,all other modes work fine.

Any help would be great or any web related sites for yeasu faults etc

tia Dave mw5adj

1467. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <898i0e$m2f$1@SOLAIR2.EUnet.yu>
Source record: 63072
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1468. Re: 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: meas+ures@vcnet.com
Message-ID: <meas+ures-2602000613530001@port92.dial.vcnet.com>
Source record: 63073

In article <38AB8684.6DA2B4C1@NO-SPAMtcainternet.com>, "Randall D. DuCharme" <randyd@NO-SPAMtcainternet.com> wrote:

> ......
> I'm thinking of building a small HF amp for CW and SSB with a couple of 4-65As
> that I have laying around. My questions are as follows since I cannot find a
> circuit diagram using these guys.
>
> I understand that this is one tube that CANNOT be run with grids grounded so:
>
> If I go cathode driven, how do I calculate the amount of drive required for
> full output?

Cathode-driven means the grids are grounded. Grid-driven means the cathode is RF-grounded.

> If I go grid-driven, how do I calculate the correct amount of grid
> 'swamping'. (The transmitters I have currently run single 6146 finals at
> about 90 W input)

The idea is not to allow the grid to go into the positive region at the drive peak. At the same time, the correct idle current must be maintained, so the whole thing is like a balancing act. . With a 3kV anode supply and a 500v screen supply, the constant-current curves show that roughly -130v is needed to obtain c. 30mA of Zero Signal Anode Current (ZSAC). For Class AB1 linear operation, to develop 130v-pk across a 50-ohm grid-termination, 169w PEP is needed. (Ohms' Law) With a 200-ohm grid termination and a 1 to 4 broadband transformer, to develop 130v-peak, c. 70 w is needed. A diagram on my Web site shows such an arrangement. My guess is that each 4-65A should be able to produce approx 250w in linear service. Thus, for a legal limit 4-65A amp., one would need a half dozen of 'em in parallel. There is an old-wives' tale about too much C for 10m operation with paralleled tubes. However, double the number of tubes and the required C-tune doubles. // I would use neutralization above 7.3MHz.

> In either case, any other configuration tips that are particular to these
> tubes from anyone with experience with them would be most welcome as well.
> (like their favorite plate / grid voltages, etc)
>
The max. key-down linear service ratings are 3kV on the anode and 600v on the screen. However, since the plate-modulated rating is 2500v max., (5000v-peak) my guess is that 4000v would be ok for SSB - as long as tuneup was accomplished with 50wpm dits or a tuning pulser.

> Thanks a lot guys (and gals???)
>
>
> NOTE: To reply directly to me, please remove NO-SPAM from my email address.
> Sorry for any inconvenience but due to the HORRENDOUS amount of SPAM
> received as a result of posting to these newsgroups, I find no other easy
> solution.

There are programs that fish e-mail address out of ordinary mail traffic,
as well as off of Newsgroups and Web sites. Spam is a fact of life.
Clicking Delete is one of life's necessities.

cheers, Randall

--
- Rich... 805.386.3734.
www.vcnet.com/measures, remove plus from adr.

1469. Re: TEK 485 Scope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <DoRt4.13545$PA2.1212811@bgtnsc06-news.ops.worldnet.att.net>
Source record: 63074

Hi Dave,

I have repaired and calibrated these units before; it sounds as if one or more of the high voltage capacitors have gone bad. This was a common problem.

Hope this helps.

Fred
IDC

David Shalita <af389@lafn.ORG> wrote in message
news:38B71C5D.F6A6FA47@lafn.org...
> Hi,
>
> My QRP homebrew favorite test gear has failed.
>
> Last week, my TEK 485 scope suddenly began having wildly varying
> brightness when started cold. Today, the scope won't start, panels
> lamps are all off, and I hear only a slow "tick tick" sound.
> Power Supply probably seeing a fault and shutting down repeatedly.
>
> I am looking for a local place to repair,
> local to San Fernando Valley, near Los Angeles.
> Appreciate any recommendations.
>
> Thank you for off topic bandwidth.
> This scope is a GREAT piece of gear.
> I am lost without my FAVORITE scope.
> 73, W6MIK
> --
> David Shalita (Dave)
> af389@lafn.org
> Van Nuys, CA

1470. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Christopher Cox <cobox@urec.net>
Message-ID: <01bf806b$78a68c20$187f473f@cbx-nt>
Source record: 63075

Hi Bill,

I have seen the print for the Mighty Midget and am wondering how the BFO couples with the detector?

Christopher Cox
KC8FRJ

1471. htx-10

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Ed Foster <edfoster@mindspring.com>
Message-ID: <38B7F63E.6723@mindspring.com>
Source record: 63076

Folks, I have one of these radios that my wife purchased for my birthday last month. It seems to work fine on all modes. My only complaint is that I have never seen the s meater rise above s5. The receiver seems to receive just fine.

Does anyone have a mod for this radio that will allow you to transmit cw (my favorite mode) or open up for 11 meters. I know this would be a new low but its pretty boring on the road (2 hrs daily) when the band is closed. Ed

1472. Re: Need Help w/mike ckt for Icom 735

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: FC <me@home.com>
Message-ID: <S9Tt4.1007$eh.127115@news.bc.tac.net>
Source record: 63077
Cross-posted to: alt.ham-radio.marketplace,rec.boats.electronics,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Norm,
The best way I figure, is to open the back of the mic, and look at where the wires are connnected to. I would figure it's an electret mic by your discription, but opening it up would confirm, and it sounds like you have the PTT to the red wire confirmed. Using the black wire as your ground reference is not usually a good idea, as it just may be the other side of teh mic cartridge. (i.e. green and redd may be PTT, etc.)
Anyway, you didn't mention if you had the wiring connections for the IC725, so here they are in case you dont.
(8 pin)
1- Mic Input
2- +8V DC output (be careful with this one, you can pop a regulator of you short it.)
3- Freq up/down
4- No Connection
5- PTT
6- Gnd (PTT)
7- Gnd (Mic)
8- Audio out.

I sure hope this helps!

- Fred VE7EJ

"Norman Owens" <kq6td@atlantic.net> wrote in message
news:X6Rs4.614$475.119484@news1.atlantic.net...
> Somehow I have misplaced my Microphone for my Icom 735 while we moved from
> one boat to a another. I have a non Icom mike and wonder if it will work
on
> my radio and how to hook it up. I have the 8 pin plug. The mike I have
is
> marked GE Communications on the front, and on the back is 344A4528P55 Rev
B,
> Assembled in Mexico.
>
> It has 5 wires and I assumed Black is ground or common, so
>
> Blk to red= open and then "0" with PTT
> Blk to Grn= open and then 2 meg with PTT
> Blk to wht= acts like cap is charging I stopped at 22 meg. PTT no effect.
> Blk to Blue= 4.5mg, PTT no effect
>
> Can I use this mike and how would I hook it up to the plug. Please give
> how I should look at the plug, front or back.

>
> Thanks Norm
>
>
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>

1473. HAMFEST - March 5 - Lindenhurst, LI NY

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: W2GSB <info@gsbarc.org>
Message-ID: <7WTt4.13128$dx4.43968@news.optonline.net>
Source record: 63078
Cross-posted to: alt.radio.scanner,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.cb,rec.radio.swap

HAMFEST March 5, 2000 - Lindenhurst, LI

GREAT SOUTH BAY AMATEUR RADIO CLUB & SUFFOLK COUNTY RADIO CLUB
ARRL APPROVED LONG ISLAND HAMFEST - March 5, 2000

On March 5, 2000 the Great South Bay Amateur Radio Club & Suffolk County Radio Club will again sponsor an indoor Hamfest. The location will be at the:

Knights of Columbus
400 South Broadway
Lindenhurst, Long Island, NY

There will be radio equipment, electronic components, computers and accessories, software, books, technical manuals, ARRL information, Amateur Radio License Exams, Door Prizes. General admission is $6.00.
Free Admission for spouses and children under 12.

VE - ARRL - 12:00 NOON
For exam candidates please remember to bring your original FCC Amateur Radio license (if licensed), any C.S.C.E. forms that are pending, plus a photocopy of each, pens, calculator, formal form of ID (preferably photo ID),
and the examination fee, to the exam session. 1999 ARRL/VEC fee is $ 6.45, exact change is appreciated. Novice exams are free.
The VE team is from ISLIP ARES Group and GSBARC. Thanks guys.

PLEASE NOTE: The VE session will be held at the Babylon Town EOC.
200 E Sunrise HWY, North Lindenhurst, NY.

Vendor information - Walter Wenzel KA2RGI at (631)957-0218.
Email info@gsbarc.org

Talk-in will be via W2GSB Repeater on 146.685 4Z(136.5) PL.

Food Service during the Hamfest will be provided by members of the Knights of Columbus Council.

Information is also available during the GSBARC 2 meter info net every Monday evening at 7:00 pm on the W2GSB repeater, 146.685 -600 4Z(136.5) PL required. You may also write to:

HAMFEST MAR2000
P.O. Box 1356
West Babylon, NY 11704

Email: info@gsbarc.org

Visit GSBARC online at http://www.gsbarc.org/hamfest.htm or
SCRC at http://www.members.tripod.com/~parasca/index/scrc.html

NEXT HAMFEST - October 29, 2000

73,
GSBARC & SCRC

1474. Re: QST article needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8997u5rnn1@nnrp1.deja.com>
Source record: 63079

In article <38b67e3d.4270430@news.intrex.net>,
kb2ehj@intrex.net wrote:
> Hello,
>
> I'm looking for an article that appeared in the December 1991 QST
> that was about building a inexpensive deskmike.
>
> If you have it I would greatly appriciate getting a photo copy
> either mailed to me or if you have a scanner a scanned image
> emailed to me.
>
> I'm current in the call books and my email is as follows:
>
> kb2ehj@intrex.net
>
> 73's
>
> Mark
> KB2EHJ
> Durham, NC
>
Sent directly to your e-mail address.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1475. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: DrMilankov <yod@eunet.yu>
Message-ID: <8996h2$1f9$1@SOLAIR2.EUnet.yu>
Source record: 63080
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Hi there, I work on it!

Science Hobbyist <bbeaty@microscan.com> wrote in message
news:88uuscirk1@nnrp1.deja.com...
>
>
> Here's some weird ramblings I've posted on my site:
>
> ENERGY-SUCKING ANTENNAS (electrically small resonators)
> http://www.amasci.com/tesla/tesceive.html
>
>
> MORE MUSINGS ABOUT ENERGY-SUCKING ANTENNAS
> http://www.amasci.com/tesla/tescv2.html
>
>
> Briefly: if an atom is 0.1 nanometer across, how can it
> intercept light waves which have 500 nanometer wavelengths?
> As an "antenna", an atom is far too small!
>
> Answer: the atom resonates electrically, which creates a
> strong synchronous AC field in its nearfield region. The local
> e-field and b-field of the atom superposes with the fields of
> the incoming EM waves, which causes the waves to bend towards
> the atom. If we plot the Poynting vector field, we find that
> the atom "sucks in" the energy like a miniature black hole.
> As the waves march along, the phase of the atom's fields stay in
> step, and the Poynting vector keeps pointing in towards the
> atom. This works even though the atom is extremely small compared
> to the wavelength, since the fields of the nearfield region *ARE*
> the antenna.
>
> The same thing occurs with conventional radio waves and
> electrically small dipole antennas if a large AC voltage is
> impressed upon the antenna. The same thing occurs with small
> loop antennas if they are given a large current. Actively
> resonating antennas draw in far more energy than passive
> pickup coils. In theory, a tiny loop antenna can behave as if it
> were electrically enormous, and can reach out and intercept
> huge amounts of energy. At VLF frequencies, this effect
> is significant. Nikola Tesla could have used this effect as part
> of his "wireless power" scheme. It explains how even a tiny
> antenna could intercept significant VLF wattage.

>
>
> And you thought "crossed-field antennas" were weird! What about
> the loopstick inside an AM receiver?
>
>
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1476. FYI: HomeBrew Antenna Projects

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38B81F98.CA8D5135@ix.netcom.com>
Source record: 63081

Hundreds of Antenna projects at URL:
http://www.ac6v.com/pageant.html

Many new ones just added

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

1477. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2602001355220001@usrh-5-134.hip.cam.org>
Source record: 63082

In article <01bf806b$78a68c20$187f473f@cbx-nt>, "Christopher Cox"
<cobox@urec.net> wrote:

> Hi Bill,
>
> I have seen the print for the Mighty Midget and am wondering how the BFO
> couples with the detector?
>
> Christopher Cox
> KC8FRJ

Without digging for it, and I'm not even sure I have the schematic around,
I'll make a guess. If it uses a 6U8A pentode/triode in one package, then
I can make a good guess. The pentode is the product detector, and the
triode is the BFO. The inter-electrode capacitance is what couples the
BFO signal into the product detector.

I have a 1961 Handbook in front of me, and it has a simple superhet
using a 6U8A as product detector and BFO. The article even mentions
that "stray coupling at the socket and in the tube provides sufficient
coupling".

Michael VE2BVW

1478. Re: htx-10

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: robertc908@aol.com
Message-ID: <20000226142416.05849.00000860@ng-fa1.aol.com>
Source record: 63083

Good idea. CBers will be very pleased to see the fine example of compliance with the FCC rules and regulations. It will difinately encourage them to join our ranks.
Are you a licensed amateur radio operator?
73's
Bob, W4RLC (formerly WA7OGU)

1479. Antenna phasing unit description wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: CA <x@y.z>
Message-ID: <dkWt4.855$yw1.1782@nntpserver.swip.net>
Source record: 63084

Looking for a description of an antenna phasing unit for reception. Function similar to the MFJ 1026.

/Christer
sm6pxj

1480. Active Stealth (was Re: Weird stuff: tiny resonant antennas)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <oFYt4.11898$84.365594@elnws01>
Source record: 63085
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Consider a highly resonant LC tank that is coupled to an incident field. The tank initialy acts as a short to the field, absorbing power as it rings up, until it is oscillating with the same potential as the incident field and absorbing no more energy (its losses not withstanding).

Now if it could be switched, inverted 180 degrees in phase, it would indeed cancel the field around it. That is called active noise cancelation. The trick is to generate the conjugate field, quickly without becoming an oscillator.

Consider a small spiral patch antenna that covers an octave. It is placed on a very dissipative ferrite-graphite composite, 1/2 wavelength (mid-band) thick. Underneath is another spiral patch. The spiral patch on top is the input port, the patch on bottom the output port, with an amplifier MMIC in between. The system is now a feedback amplifier, designed to cancel the incident field.

An aircraft would be covered with this oscillator skin. Each oscillator is a sandwich of a top and bottom conical spiral with graphite in between. There are multiple layers of these spirals, in a 3 dimensional fractal pattern, to cover decades of radar illumination.

Sound workable?

Scott

1481. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2602002048000001@dialup-282.hip.cam.org>
Source record: 63086

Of course, you give up single signal selectivity, but of course that
wasn't a feature of superhets until some years after Armstrong
came up with the idea of superheterodyne.

Or to put it in modern terms, you end up with a direct conversion
receiver with converter ahead of it.

THat doesn't negate the idea, and one probably is better off with
such a scheme and later improving things, than not starting in
the first place.

There was an article in Ham Radio towards the end of it's life, I
don't have the article handy, about making ladder filters with
vriable selectivity. The guy switched the capacitors to give
both CW and phone selectivity. He went into the details of the
project, so it is a good basis for further experimentation.

Michael VE2BVW

In article <38b3bae4.4966593@news.erols.com>, n2cqr@erols.com (Bill Meara
) wrote:

> I was tinkering with my version of Doug DeMaw's Barebones Superhet
> Receiver (20 meters, single conversion superhet using mostly 40673
> dual gate MOSFETs, 3 crystal ladder filter using 3.359 color burst
> rocks). I wanted to be able to listen to SSB signals but the crystal
> filter was too narrow. Not wanting to go to the trouble of building
> a proper 2-3 kc wide filter for the phone signals, I decided to come
> up with an arrangement to just "switch out" the crystal filter.
>
> I used two switching diodes controlled from the front panel. When the
> switch is thrown the diodes are turned on and, in effect, a jumper
> wire goes from the output of the LC tuned circuit at the input of the
> filter to the input of the LC tuned circuit at the output of the
> filter. IF selectiivity is then limited to that provided by the two LC
> tuned circuits.
>
> I found that with the insertion loss of the crystal filter thus
> eliminated, I was getting too much IF gain, so instead of just
> switching in the jumper wire, I now switch in a 10K pot that I can
> adjust to keep the gain roughly equal to that that I get with the
> filter switched in.
>
> This is a very easy way of being able to use those very narrow CW
> receivers for casual phone band monitoring. This morning I fired up
> the receiver and was able to listen to some VKs involved in a very

> pleasant discussion of the southern aurora!
>
> 73 Bill N2CQR
> http://www.erols.com/wmeara

1482. Re: htx-10

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-26 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <38B89071.2915C3F5@inreach.com>
Source record: 63087

you need to get it closer to the hamburger. ;)

Ed Foster wrote:
>
> Folks, I have one of these radios that my wife purchased for my
> birthday last month. It seems to work fine on all modes. My only
> complaint is that I have never seen the s meater rise above s5. The
> receiver seems to receive just fine.
>
> Does anyone have a mod for this radio that will allow you to transmit cw
> (my favorite mode) or open up for 11 meters. I know this would be a new
> low but its pretty boring on the road (2 hrs daily) when the band is
> closed. Ed

1483. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Christopher Cox <cobox@urec.net>
Message-ID: <01bf80e1$9e253a20$9c7f473f@cbx-nt>
Source record: 62995

Thanks for the reply Bill.

Mike pretty much said the same thing.

I guess I never really thought of it, but I guess this "feature" of sharing the same envelope could really be a problem in other designs. And I always thought the 12AX7 was the greatest...:-)

Regards

Christopher Cox
KC8FRJ

1484. QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: csusb4u@aol.com
Message-ID: <20000227010813.17169.00002098@ng-ci1.aol.com>
Source record: 62996

Having just passed my extra upgrade last week, I'd like to celebrate with the purchase of a good QRP kit. I'd prefer something with SSB/voice, but I'm not ruling out CW only rigs. I've heard lots of good press about the DSW-40, but wonder what else is out there. This would also be my first kit, although I've been soldering for years.

Rich

1485. Re: Antenna phasing unit description wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: CA <x@y.z>
Message-ID: <fr5u4.1020$yw1.2286@nntpserver.swip.net>
Source record: 62997

Just what I was looking for. Thanks!
Very useful, this Internet..
73
Christer

>Try this URL: http://hometown.aol.com/MarkWA1ION/weblink.htm
>
>Steve AA7U

1486. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <89b746$4n2$1@nnrp1.deja.com>
Source record: 62998

In article <38B5D0FD.C5D4B6FC@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
> I've always heard it as a = the mean radius in inches, that is, the
> radius to the center of the wire. Assuming that's true, a = 1/16 +
> 0.016/2 = 0.0705 inches. b = 14*0.0159" = 0.2226" and the formula
> suggests L = 0.34uH when I run it on my calculator. I'm not sure why
> this disagrees so much with Luiz' result, but suspect a math error
> somewhere.

You must be right but, as you can note, I wrote the source of the
information at my message end; The Radio Amateurs Handbook drawing of
the coil shows clearly 'a' as the external value of the measure, not the
average one. About the final value, I asked the original message issuer
to recalculate it because I had done the calculus only for once.

--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1487. Re: ? Yaesu FT50R ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Christopher Cox <cobox@urec.net>
Message-ID: <01bf812e$fe29e360$2f7f473f@cbx-nt>
Source record: 62999

Hi Paul,

> little radio to work like a real duples station so working the UO-14 FM,
up
> 145.975Mhz and down 435.070Mhz? It is somehow more easy to do the job if
you
> are abel to receive your own signal.

Well, the radio is NOT full duplex, so you will never be able to hear your own signal's unless one of the birds is in "parrot" mode. But I use my FT-50 to work AO27 and SO35.

Turn to page 26 and follow the instructions for "Custom Tx Offset". Be sure to store away 3 to 4 frequency pairs to accommodate the Doppler shifts.

DopplerShift = Frequency * (SatVelocityInRelationToYou / SpeedOfLight).

Here are the frequency pairs I have programmed up in my FT-50

TX RX
AO-27(1) 145.845 436.805
AO-27(2) 145.850 436.800
AO-27(3) 145.850 436.795
AO-27(4) 145.850 436.790
AO-27(5) 145.855 436.785

SO-35(1) 436.285 145.825
SO-35(2) 436.295 145.825

(Reversed, sometimes they reverse the transponder)
SO-35R(1) 145.950 436.255
SO-35R(2) 145.950 436.250

73's

Christopher Cox
KC8FRJ

1488. 4-65a Design questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000227122603.009bd580@pop.uky.edu>
Source record: 63000

Why don't you trade your pair of 4-65's for a 4-125 and go grounded grid?
No need to build a more complex power supply or waste power heating
a grid swamping resistor.
73
Bill wa4lav

1489. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: k7itm@aol.com.nospam
Message-ID: <20000227145600.10734.00002255@ng-da1.aol.com>
Source record: 63001

Reg Edwards wrote, regarding extracting power from a loop:

>This cannot be achieved in practice only because of the RF loss
>resistance of the loop conductor.

Only?? And not on losses in a matching system as well? (In practice, for a small loop, are we likely to have more loss in the loop conductors, or in the matching system?)

(It might be good to comment on the relative advantages, or lack thereof, of multi-turn versus single-turn loops, too, before someone tries to jump on that one...but housework beckons at the moment.)

Cheers,
Tom

1490. Long wave receiver circuit schematic required

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Andy Greenhalgh <andy.greenhalgh@localhost.localdomain>
Message-ID: <38B98995.83FF72E3@localhost.localdomain>
Source record: 63002

I enjoy listening to French radio stations in the north
of England. However, my domestic receiver produces a
slightly noisy signal during the day and is swamped by
other stations at night. A family friend (and radio HAM)
has pointed out the limitations of my radio and the need
to construct a suitably long aerial/good earth.

I would be grateful if someone could point me in the
direction of a quality long wave receiver circuit schematic.
I am capable of building fairly complex circuits as I have
experience in data acquisition/instrument control
and signal handling. I have searched the web but can
only find short wave circuits.

Many thanks

Andy

1491. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38B992F4.DC3964E6@eznec.com>
Source record: 63003
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> . . .
> > Are you suggesting that such antennas are not linear systems?
>
> Not at all. As far as I know, their behavior is totally
> covered by Maxwell's equations. It's part of the dynamics
> of the nearfield region. The only "nonlinearity" is that the
> EM fields do not behave the same in the nearfield region as
> they do in empty space far from an antenna.
> . . .

This statement could be interpreted in a couple of ways, and lead to a misunderstanding if the wrong interpretation is chosen.

The equations governing EM fields are the same at any distance from the antenna, including all of the near and far field. In this sense, then, EM fields behave exactly the same in all regions. There's no magic area or distance at which the equations and behavior change.

However, some components of the EM wave change and fade very rapidly with distance from the antenna, so components and characteristics which are significant or even dominant when close to the antenna are for all practical purposes nonexistent at greater distances. This allows simplification of the equations governing EM waves in the far field. The factors important in the near field still apply, but in the far field they're so small they can be ignored with no practical loss in accuracy. So in this sense the behavior of the EM wave is different in the near and far fields as Beaty said.

Roy Lewallen, W7EL

1492. Mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: "colinlowe@jet" <colinlowe@jet.es>
Message-ID: <89c3dbjtb1@lola.ctv.es>
Source record: 63004
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,uk.radio.amateur

http://personales.jet.es/colinlowe/index.htm

Have a look at my webpage, it includes mods for the Yaesu FT847, Motorola GP300, GM300 and McMicro. Plus the Kenwood TM732 and TH48. Standard C510 etc...

Regards to all.

1493. Motorola

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: "colinlowe@jet" <colinlowe@jet.es>
Message-ID: <89c3evjtn1@lola.ctv.es>
Source record: 63005
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,uk.radio.amateur

http://personales.jet.es/colinlowe/index.htm

Have a look at my webpage, it includes mods for the Yaesu FT847, Motorola GP300, GM300 and McMicro. Plus the Kenwood TM732 and TH48. Standard C510 etc...

Regards to all.

1494. Yaesu FT847

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: "colinlowe@jet" <colinlowe@jet.es>
Message-ID: <89c3fmjtt1@lola.ctv.es>
Source record: 63006
Cross-posted to: alt.ham-radio.mods,rec.radio.amateur.homebrew,uk.radio.amateur

http://personales.jet.es/colinlowe/index.htm

Have a look at my webpage, it includes mods for the Yaesu FT847, Motorola GP300, GM300 and McMicro. Plus the Kenwood TM732 and TH48. Standard C510 etc...

Regards to all.

1495. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <89c6mc$83m$1@neptunium.btinternet.com>
Source record: 63007

The internal resistance of a tuned loop is radiation resistance Rr plus conductor loss resistance Rc. This sum has to matched to the receiver input resistance usually 50 ohms.

And so a transformation step-up voltage ratio of Squareroot(50 / (Rr + Rc)) is needed. The losses in the transformation can be made negligible. The efficiency of the antenna is then simply

Efficiency = Rr / (Rr + Rc).

If a loop antenna is near the ground or or other conductors there will be an extra loss. This is taken into account just by increasing Rc.

For the same amount of copper a multi-turn loop is invariably less efficient than a single turn loop. A single turn made of 30mm copper water pipe is the best form of construction unless the frequency is so low you can't find a large enough value of tuning coapacitor. For medium and long wave reception use a box or frame antenna.

Download in a few seconds programs RJELOOP1 and RJELOOP3 from my website below. Not zipped up. Can be run immediately.
--
==========
Greetings from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
K7ITM <k7itm@aol.com.nospam> wrote in message
news:20000227145600.10734.00002255@ng-da1.aol.com...
> Reg Edwards wrote, regarding extracting power from a loop:
>
> >This cannot be achieved in practice only because of the RF loss
> >resistance of the loop conductor.
>
> Only?? And not on losses in a matching system as well? (In
practice, for a
> small loop, are we likely to have more loss in the loop conductors,
or in the
> matching system?)
>
> (It might be good to comment on the relative advantages, or lack
thereof, of
> multi-turn versus single-turn loops, too, before someone tries to
jump on that
> one...but housework beckons at the moment.)
>

> Cheers,
> Tom
>
>

1496. Re: QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38b99f52.1048496@news.mindspring.com>
Source record: 63008

Ok, I stand corrected! It was an off-the-cuff remark, not a price quote. I didn't add it up. And yes, it is a neat looking rig. It is THE most un-kit looking kit I have ever seen.

Russ

k6mhe@arrl.net (Dan Richardson) wrote:

>On Sun, 27 Feb 2000 16:57:48 GMT, rcnixon@mindspring.com (Russell C.
>Nixon) wrote:
>
>>It's going to cost you a bit, but the Elecraft K-2 looks like a great
>>rig. CW with an SSB option. The receiver section looks like it has
>>very good specs (it's not general coverage though) and a guy in my
>>club likes his a great deal. With all options, it's under $700.
>>
>>Russ Nixon
>
>When I totaled it up I came up with over $900 for the whole package..
>
>Did I get my number wrong?
>
>But, neat looking rig..
>
>Danny, K6MHE
>

1497. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2702002330220001@dialup-284.hip.cam.org>
Source record: 63009

In article <01bf80e1$9e253a20$9c7f473f@cbx-nt>, "Christopher Cox"
<cobox@urec.net> wrote:

> Thanks for the reply Bill.
>
> Mike pretty much said the same thing.
>
> I guess I never really thought of it, but I guess this "feature" of sharing
> the same envelope could really be a problem in other designs. And I always
> thought the 12AX7 was the greatest...:-)
>
> Regards
>
> Christopher Cox
> KC8FRJ

I discovered last night that I do in fact have a schematic, though I know I've looked before when Bill has mentioned the receiver. It's in the 1969 edition of the ARRL Handbook (and probably other years).

What's interesting, once you understand how the BFO gets to the detector, is that it's just a simple envelope detector, like you'd see in plenty of receivers before SSB took over. You'd turn on a BFO for code (and SSB as long as you did things right), but if you turned off the BFO there'd still be audio, unlike if it was a product detector. You'd think that by that time they'd make sure a product detector was in place, though I suppose simplicity and the still common use of AM would prohibit it. There is another superhet in that 1969 Handbook, and it also uses a simple diode detector. A few years later, and every receiver in the Handbook would have a product detector, and sometimes no envelope detector.

In some ways, the coupling through the IF amplifier hints at another scheme that was used in the early days of SSB, and in fact is still useable today: front end beat injection.

You'd lightly couple some sort of stable variable frequency oscillator to the antenna jack of a receiver. You'd tune in an SSB signal so it's strong, and then tune the oscillator so it beat with the incoming signal and inject a local carrier. The advantage of this scheme was that you didn't have to modify the receiver if it had no BFO, and if the receiver was unstable, the tone of the resulting audio did not vary. If the injection oscillator was stable enough, once you'd tuned it to the point where it supplied the carrier of the incoming signal, if the receiver drifted it would vary in strength but the beat from the incoming signal and the injection oscillator remained

the same.

Some of those mobile converters often had a BFO operating at a frequency in the broadcast band, to act in this same way.

If you read the text of the Mighty Midget, they tell you to reduce the RF gain when tuning SSB. This was necessary so the BFO was strong enough in reference to the incoming signal. If the ratio of the two signals was wrong, the recovered SSB signal would be distorted or completely unintelligeble.

So long as you were using a simple envelope detector, injecting the BFO in the IF amplifier, or even the front end, helped to get the beat signal strong enough by the time it reached the envelope detector. Of course, dynamic range probably suffered, since you were asking the receiver to amplify not only the incoming signal, but the carrier oscillator.

Michael VE2BVW

1498. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2702002344090001@dialup-284.hip.cam.org>
Source record: 63010

In article <38b95626.72255814@news.erols.com>, n2cqr@erols.com (Bill Meara
) wrote:

> On Sat, 26 Feb 2000 20:47:58 -0500, blackm00@cam.org (Michael Black)
> wrote:
>
> >There was an article in Ham Radio towards the end of it's life, I
> >don't have the article handy, about making ladder filters with
> >vriable selectivity. The guy switched the capacitors to give
> >both CW and phone selectivity. He went into the details of the
> >project, so it is a good basis for further experimentation.
> >
> > Michael VE2BVW
>
>
> I'll look for the Ham Radio article. Thanks for the tip.
>
> 73 Bill N2CQR

I think I could put my fingers on the article a lot easier than a lot
of things that I remember but have to dig for.

However, someone has put a cummulative index of Ham Radio up on a webpage.
There are articles that I haven't found, so it may be missing some things,
and it's broken up into categories so you first have to decide where
a given article might be filed, but it's at:

Linkname: ham radio magazine index : 1968 - 1990
URL: http://webhome.idirect.com/~griffith/hrindex.htm

I'm pretty certain that this is the article I'm thinking of:

Switchable bandwidth crystal filter N2DCH 22 Feb 90

The author has had some articles in the various magazines about test
equipment useful to making ladder filters 9and other things) and
a shortwve broadcast receiver (including ladder filters) in Radio
Electronics (or Electronics Now perhaps, depending on the year it
appeared) which is or wsa available as a kit from Dan's Small Parts,
and he also had an article in 73 about making upper and lower sideband
ladder filters, by the simple process of transposing the crystals
and capacitors so the capacitors are in series with the signal path,
and the crystals go to ground.

Michael VE2BVW

1499. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38b88559.18817689@news.erols.com>
Source record: 63088

On Sat, 26 Feb 2000 15:03:23 GMT, "Christopher Cox" <cobox@urec.net>
wrote:

>Hi Bill,
>
>I have seen the print for the Mighty Midget and am wondering how the BFO
>couples with the detector?
>
>Christopher Cox
>KC8FRJ

Chris: Good question. In fact, that was the question that occurred
to me when I first looked at the circuit diagram.

Here is the question I posed back in summer 1998:

Glowbuggers:

There is a Lew McCoy receiver in the April 1966 QST that is really
very tempting. Three 6U8s. Single conversion superhet with a 455 kc
IF. Crystal filter using two FT-243 rocks.

I have most of the needed parts, but before I start melting solder, I
want to make sure I understand the circuit.

The one qustion I have relates to the detector. Its a very simple
solid state diode detector. Two 1N34a's in a voltage doubler
arrangement between the IF amp and the AF amp. Half of one of the
6U8's is used as a BFO at 455 (+/-) kc.

Here's where I'm confused:

Text reads: "There is sufficient bfo signal injection in V3A (IF AMP)
without using a coupling capacitor, so none was used."

The IF amp has a 455 kc transformer can in the plate. Seems to me if
the mixing with the BFO energy was taking place in that stage, the
resulting AF wouldn't make it through the can to the detector and AF
AMP.

Could it be that the mixing takes place in the detector circuit
itself?

Anyone have any experience with this RX?

Thanks,
73 de N2CQR

I got a number of responses, all of which agreed that the mixing took place in the diode detectors. This one is one of the best replies:

Re the phantom injection and how the audio gets through the IF xfmr. The answer is that there isn't any audio present until the signals go through the detector. If you sum two 455 kHz signals whose frequency is
say 1 kHz apart, you still have just two 455 kHz signals, no audio frequency is present. If you do this with a couple of signal generators
and look at the sum on a scope, you will see what looks like an amplitude modulated signal. The envelope of the sum appears to be modulated at the difference frequency (1 KHz in this case). This effect
is produced as the instantaneous values of the two 455 kHz signals alternately reinforce and subtract from each other as their relative phase varies. The diode detector action can be viewed in at least two different ways. One way of looking at it is that it just detects the amplitude modulated waveform you get from summing the two signals. The
other way is that the nonlinear action of the diode results in an output
current which has components resulting from the product of the two signals. This is similar to the action of a mixer. The result of Sin(a) * Sin(b) includes terms of frequency a-b, which will be the frequency difference of the two 455 kHz signals, or in my example 1 KHz. See any trigonometry book for the formulas for Sin(a) * Sin(b).

So all that has to happen is for some of the BFO voltage to get into the
IF amplifier and show up at the detector. It is hard to keep it out without good shielding, especially when an IF amplifier and the BFO share a common envelope, not to mention coupling via common B+ wiring and filament wiring etc.

Interesting stuff. I hope you build one of these. Keep us posted.
73 de Bill N2CQR

1500. Re: Svetlana out of business????

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <%I_t4.34541$3b6.163736@ozemail.com.au>
Source record: 63089

Tom Hix is maybe trying to create false rumours to sell tubes??? Well i would hate to use the word never, but the impact of Svetlana going under is minimal. Besides eimac have equivalents to most of their tubes. So who cares, the prices for the tubes are a rip off considering what they make them for, they should be sold for less and not price fix with eimac.

<py1ll@my-deja.com> wrote in message news:898dhravd1@nnrp1.deja.com...
> In article <19372-38B6E4EA-4@storefull-104.iap.bryant.webtv.net>,
> w4th@webtv.net (Tom Hix W4TH) wrote:
> > I heard a terrible rumor that Svetlana was going out of business. I
> was
> > wondering if anyone else has heard this?
> > If anyone can shed some more light on this situation, please, let us
> > hear from you.
> > 73
> > Tom
> > W4TH
> >
> > ==================================
> > Be sure to visit my web sites.
> >
> > Amateur radio amp tubes.
> > http://msnhomepages.talkcity.com/ClassifiedsCt/tomstubes/index.html
> >
> > Ham Radio Homepage.
> > http://www.geocities.com/Heartland/Woods/6222/
> >
> >
>
> Its homepage is fully active at http://www.svetlana.com/ and nothing
> about that is found on there.
> --
> Greetings,
>
> Luiz - PY1LL
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1501. emwin

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: montech <gmonitor@telepath.com>
Message-ID: <Yb%t4.7985$JQ.471898@monger.newsread.com>
Source record: 63090

Hi all,
anyone here working with emwin?
I would like to set up to recieve retransmitted data on vhf, but
don't know which scanners would be good for this purpose.
Am also interested to know if anyone has had experience with
dual purpose HT's like the Icom Q7A.

Thnks in advance.
Bill
KD5GOX

1502. Re: Determine Inductor value of coil

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <899vdg$1nv$1@plutonium.btinternet.com>
Source record: 63091

The self capacitance of a single layer solenoid is not releated to the closeness of adjacent turns unless there are very few turns. Only when there are two or three turns does it become significant.

If there are N turns then the resulting end-to-end capacitance due to closeness of winding is the capacitance between two adjacent turns divided by N-1 which is a very small amount. All the bits are in series.

Self-capacitance is a function of overall length and diameter of the coil and practically independent of the number of turns. It can be determined very accurately by searching for the resonant frequency with an antenna analyser using a single turn link around the centre of the coil.

Reg.

1503. WTB Icom IC 22A Xtals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: navyvet39@my-deja.com
Message-ID: <89a4hremj1@nnrp1.deja.com>
Source record: 63092

I need the 146.34/146.94 repeater and
146.19/146.79 repeater xtal's for my(Icom IC 22A)
2 Meter Transceiver.

If you have email me ! Thanks in advance.

Sent via Deja.com http://www.deja.com/
Before you buy.

1504. Re: Antenna phasing unit description wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <38B88FFE.35184C5B@flash.net>
Source record: 63093

Hello,
Try this URL: http://hometown.aol.com/MarkWA1ION/weblink.htm

Steve AA7U

CA wrote:
>
> Looking for a description of an antenna phasing unit for reception. Function
> similar to the MFJ 1026.
>
> /Christer
> sm6pxj

1505. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-27 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89a9ru$i5b$1@nnrp1.deja.com>
Source record: 63094
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B58F6E.85777809@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
> Science Hobbyist (William Beaty) wrote:
>
> > The same thing occurs with conventional radio waves and
> > electrically small dipole antennas if a large AC voltage is
> > impressed upon the antenna. The same thing occurs with small
> > loop antennas if they are given a large current. Actively
> > resonating antennas draw in far more energy than passive
> > pickup coils.
>
> Are you suggesting that such antennas are not linear systems?

Not at all. As far as I know, their behavior is totally
covered by Maxwell's equations. It's part of the dynamics
of the nearfield region. The only "nonlinearity" is that the
EM fields do not behave the same in the nearfield region as
they do in empty space far from an antenna.

> > In theory, a tiny loop antenna can behave as if it
> > were electrically enormous, and can reach out and intercept
> > huge amounts of energy.
>
> Do you have pointers to such theory?

Not on WWW. Of the papers mentioned at the end of
http://www.amasci.com/tesla/tesceive.html, the C. Bohren
paper and the Paul/Fischer paper go into the details of
the mathematics. (Me, I understand the overall concepts
and the implications, but don't have the math needed to
see any errors they might make.)

> > At VLF frequencies, this effect
> > is significant. Nikola Tesla could have used this effect as part
> > of his "wireless power" scheme. It explains how even a tiny
> > antenna could intercept significant VLF wattage.
>
> I live a couple wavelengths from a VLF transmitting station that
> radiates about 500kW. Do you have an estimate of the useful energy I
> could expect to intercept ... with how tiny an antenna, and with what
> sort of practical configuration?

I haven't seen equations for making practical predictions. For
a lossless resonator antenna, supposedly you can assume that
the capture area of your antenna is a disk of radius 1/6

wavelength or so. For waves moving parallel to the ground, it
would act like a 1/2-disk (I think). The max received power
at 2 wavelenghts distance would be roughly:

500KW*(PI*1/6^2)/2/(4*PI*2^2) = 400 watts

For an antenna with finite Q, it certainly would be lots
lower that 400W. I bet you can light some LEDs or maybe run
a solar cell motor. Also, I think the physical size of the
antenna interacts with the Q required, so a tall tower or a
very wide metal loop would not require as high a Q in order
to "suck in" power. A big square loop made from copper
water pipe would be much better than a tiny ferrite loopstick.
If the e-field is vertical, maybe a tower with a tank circuit
at its base would be best. Expect some RF voltage to appear
on the tower!

I heard a story that a poor farmer who lived downrange from
a big VLF station in Europe discovered that he could run a
heater off of a long wire fence. The station owners tracked
him down because of the changes in the antenna pattern.
They couldn't do anything legally, so they paid to heat his
home in exchange for his removing the offending "receiver."

> Are you proposing that they (loopsticks) might be any different than
> explained in the standard antenna reference books? It seems to me
that
> those explanations predict the performance actually measured for such
> antennas.

Not as far as I know. I have no such books. Do they
calculate the gain for loopsticks with and without a
tuning capacitor? According to the resonant-antenna
explanations, a 6" loopstick acts "small" for a straight
resistive load, but acts "larger" and pulls in more signal
energy if the loopstick is part of a high-Q resonator. This
is not just a matter of impedance matching, since you can
pick the best resistor for both situations, yet the received
power is different.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1506. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Constantine <wa1wla@juno.com>
Message-ID: <89cm9d$2nq$1@nnrp1.deja.com>
Source record: 63011

In article <sahr7ace2pd91@corp.supernews.com>,
"Carl R. Stevenson" <wa6vse@fast.net> wrote:
> -----BEGIN PGP SIGNED MESSAGE-----
> Hash: SHA1
>
> "Michael D. Harmon" <mharmon@tranquility.net> wrote in message
> news:38A8D57B.DF4C7011@tranquility.net...
> > Ed,
> >
> > Check out the following site:
> >
> > http://www.ivex.com/
> >
> > They have a schematic capture (drafting) program called WinDraft and
a PCB
> > layout program called WinBoard which are free for download. The
only
> catch
> > is that they are limited to 100 pins (each). You can buy additional
pin
> > capacity if you need it.
>
> Better yet, checkout Eagle (from CadSoft) Light at
> http://www.cadsoftusa.com/freeware.htm
>
> Freeware
> The EAGLE 3.5 Light Edition can be used for free!
> Limitations
> The following limitations apply to the EAGLE Light Edition in general:
> The useable board area is limited to 100 x 80 mm (4 x 3.2 inches).
> Only two signal layers can be used (Top and Bottom).
> The schematic editor can only create one sheet.
> Apart from these three limitiations the EAGLE Light Edition can do
> anything the Professional Edition can do. You can even load, view
> and print drawings that exceed these limits!
> The Freeware version of EAGLE Light adds these limitations:
> Support is only available via email or through our forum (no fax
> or phone support).
> Use is limited to non-profit applications or evaluation purposes.
> What does "non-profit" mean?
> The definition of non-profit is fairly simple and straightforward:
> If you earn money by using the Freeware version of EAGLE Light,
> you have to register it.
> This allows anybody who wishes to use EAGLE Light for their

> private hobby projects to do so. Also students can use this version
> for any educational projects. It is even ok to use this version in a
> commercial environment, as long as you just want to evaluate the
> program. As soon as you start using it for commercial projects, you
> will have to register it.
>
> I am NOT affiliated with CadSoft in any way beyond being a
> satisfied customer for their professional version ...
>
> - --
> Carl R. Stevenson - wa6vse
> <mailto:wa6vse@fast/net>
> <http://www.users.fast.net/~wa6vse>
> - --
> NCI-1052
> Executive Director, No Code International
> Fellow, The Radio Club of America
> Senior Member, IEEE
> Member, TAPR
> Member, ARRL
> - --
> Join No Code International! Hams for the 21st Century.
> Help assure the survival and prosperity of ham radio.
> <http://www.nocode.org>
>
> -----BEGIN PGP SIGNATURE-----
> Version: PGP for Personal Privacy 5.5.3
>
> iQA/AwUBOKjs2pe+N6+q84HiEQLIwwCePGSQVb8xCgzuS/Fl3uvm5UzFwo0AoISd
> Xtm8ZwLOsfIqgzhuPdPfNo0J
> =CHN3
> -----END PGP SIGNATURE-----

Or try this
http://www.microcode.com/
down load the student version
CT

--
A good place to hide your personality,is behind your microphone

Sent via Deja.com http://www.deja.com/
Before you buy.

1507. Re: Midland 70-340B VHF 2m convertion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Dennis Edey <vk4sx@dingoblue.net.au>
Message-ID: <89cd39$1ov$1@news1.mpx.com.au>
Source record: 63012

Ok Chris,which of the rigs do you htinkis a better option on 2mtrs ??
the Midland XTR's ?? or the Midland 70/340B we know over here as EXECOM's
i have some Midland SYN-TECH XTR's but very wide receiver and pagers bash
them about a fair bit .
rgds dennis.

1508. Re: Long wave receiver circuit schematic required

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <38B9C53E.FA7A12E0@flash.net>
Source record: 63013

Hi Andy,
You didn't say what receiver you are presently using for longwave reception. Perhaps the easiest route would be to build an upconverter, from longwave to HF, then purchase a decent tabletop receiver with good filters. Any older hamband-only receiver would probably work, if it had good filters, and an AM demodulator (if you're listening to domestic AM programming.)
It is not simple to build any sort of receiver, if you're interested in having superheterodyne conversion, with decent IF filters.
Steve AA7U

Andy Greenhalgh wrote:
>
> I enjoy listening to French radio stations in the north
> of England. However, my domestic receiver produces a
> slightly noisy signal during the day and is swamped by
> other stations at night. A family friend (and radio HAM)
> has pointed out the limitations of my radio and the need
> to construct a suitably long aerial/good earth.
>
> I would be grateful if someone could point me in the
> direction of a quality long wave receiver circuit schematic.
> I am capable of building fairly complex circuits as I have
> experience in data acquisition/instrument control
> and signal handling. I have searched the web but can
> only find short wave circuits.
>
> Many thanks
>
> Andy

1509. Re: SN76514

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2802000020270001@dialup-284.hip.cam.org>
Source record: 63014

In article <38b6eba1.176184286@news.online.no>, LA8AK@Online.NO wrote:

> On Fri, 25 Feb 2000 08:53:17 -0500, "Harold Johnson"
> <w4zcb@cytechcis.net> wrote:
>
> >Looking for old stock on the above chip. Only need one, but would buy
> >several if available. TI doesn't make it any more, the manufacturer of the
> >rig it goes in doesn't have stock, name your own price.
> >
> >W4ZCB
> >
> >
> believe the replacement is TL442 (DIL), this may just as well be
> obsolete now(?), W5DA mentioned this ic for product detector in R-4C
>
> 73
> Jan-Martin
> LA8AK

I thought they were identical parts, but Texas Instrument changed the
part number at one point. W5DA's article in Ham Radio for December 1977
about an up/down filter converter says it was the TL442's old designation
was SN76514.

It's odd how the device never saw common use in ham construction articles.
I know when I read about it years ago, I was interested in getting some
but I sure couldn't find it easily in small quantities.

It's hardly a magical part. It's a double balanced mixer of the same
form as what's now called a "Gilbert Cell Mixer". The advantage of
the SN76514/TL442 over the far more commonly scene MC1496, was that
all the biasing resistors were built in. Of course, that can
be a disadvantage, if what you wanted didn't fit what the TL442
was set up for.

Given the spec sheet, one could theoretically use a 1496 in it's
place, so long as things were configured properly. Or if things
were really right, an NE602 might work. I imagine how much leeway
depends on what the IC is doing in the circuit, and what purpose
the piece of equipment serves.

Michael VE2BVW

1510. Re: QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <38BA2F65.7C674904@inreach.com>
Source record: 63015

If you are going to spend that much $, why not get a kenwood ts50s or
something like that, and just turn the power down to operate qrp.

Russell C. Nixon wrote:
>
> It's going to cost you a bit, but the Elecraft K-2 looks like a great
> rig. CW with an SSB option. The receiver section looks like it has
> very good specs (it's not general coverage though) and a guy in my
> club likes his a great deal. With all options, it's under $700.
>
> Russ Nixon
>
> csusb4u@aol.com (CSUSB4U) wrote:
>
> >Having just passed my extra upgrade last week, I'd like to celebrate with the
> >purchase of a good QRP kit. I'd prefer something with SSB/voice, but I'm not
> >ruling out CW only rigs. I've heard lots of good press about the DSW-40, but
> >wonder what else is out there. This would also be my first kit, although I've
> >been soldering for years.
> >
> >Rich
> >

1511. Cheapie Quickie Ten'r

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Rooster <bullmeat@my-deja.com>
Message-ID: <89e65c$2au$1@nnrp1.deja.com>
Source record: 63016

Built the Cheapie Quickie Ten'R,QRP transmitter.Works great but can someone tell me how to add a tone to it with a simple tone generator?Thanks.

Sent via Deja.com http://www.deja.com/
Before you buy.

1512. Re: Long wave receiver circuit schematic required

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <89dfrg$38i$1@neptunium.btinternet.com>
Source record: 63017

For long waves only, a tuned RF stage, plus tuned detector, plus audio
power amplifier is all that is necessary. The twin-ganged tuned
circuits are more than adequate around 200 KHz.

If noise and interference levels are too high in northern England
there's little which can be done about it in the receiver itself A
large frame aerial, say 1-metre square, forming the first sharply
tuned circuit might be better than a random length outside wire
because of the ability to null out strong unwanted stations such as
Droitwich and some of the noise.

A frame, multi-turn loop aerial can be designed with the help of
program RJELOOP3 which can be downloaded from my website below in a
few seconds.
--
==========
Greetings from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
Andy Greenhalgh <andy.greenhalgh@localhost.localdomain> wrote in
message news:38B98995.83FF72E3@localhost.localdomain...
> I enjoy listening to French radio stations in the north
> of England. However, my domestic receiver produces a
> slightly noisy signal during the day and is swamped by
> other stations at night. A family friend (and radio HAM)
> has pointed out the limitations of my radio and the need
> to construct a suitably long aerial/good earth.
>
> I would be grateful if someone could point me in the
> direction of a quality long wave receiver circuit schematic.
> I am capable of building fairly complex circuits as I have
> experience in data acquisition/instrument control
> and signal handling. I have searched the web but can
> only find short wave circuits.
>
> Many thanks
>
> Andy

1513. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38ba91c5.153041756@news.erols.com>
Source record: 63018

On Sun, 27 Feb 2000 23:30:21 -0500, blackm00@cam.org (Michael Black)
wrote:

>I discovered last night that I do in fact have a schematic, though I know I've
>looked before when Bill has mentioned the receiver. It's in the 1969
>edition of the ARRL Handbook (and probably other years).
>
>What's interesting, once you understand how the BFO gets to the detector,
>is that it's just a simple envelope detector, like you'd see in plenty
>of receivers before SSB took over. You'd turn on a BFO for code (and
>SSB as long as you did things right), but if you turned off the BFO
>there'd still be audio, unlike if it was a product detector.

Michael: Yes, that's just what I do with my MMRX. I put a little
switch in to turn the BFO off for AM signals.

>
>If you read the text of the Mighty Midget, they tell you to reduce
>the RF gain when tuning SSB. This was necessary so the BFO was strong
>enough in reference to the incoming signal. If the ratio of
>the two signals was wrong, the recovered SSB signal would be
>distorted or completely unintelligeble.

Michael: I've had to reduce RF gain very often when the SSB signals
are strong. At one point I experimented with a more explicit
capacitive coupling between the BFO and the IF amp, but for some
reason it didin't work out and I went back to Lew's original scheme.

73 Bill N2CQR

1514. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38ba93bb.153543771@news.erols.com>
Source record: 63019

On Sun, 27 Feb 2000 23:44:08 -0500, blackm00@cam.org (Michael Black)
wrote:
>
>I'm pretty certain that this is the article I'm thinking of:
>
> Switchable bandwidth crystal filter N2DCH 22 Feb 90
>
>The author has had some articles in the various magazines about test
>equipment useful to making ladder filters 9and other things) and
>a shortwve broadcast receiver (including ladder filters) in Radio
>Electronics (or Electronics Now perhaps, depending on the year it
>appeared) which is or wsa available as a kit from Dan's Small Parts,
>and he also had an article in 73 about making upper and lower sideband
>ladder filters, by the simple process of transposing the crystals
>and capacitors so the capacitors are in series with the signal path,
>and the crystals go to ground.

Michael: Thanks. Very interesting. I'll check it out. Seems to go
against the conventional wisdom on filters, i.e., narrow CW filters
are relatively easy but wider filters for phone are much harder.

BTW: I was thinking a bit more about our comparison between my RX in
"wide" mode and a DC receiver with a converter. I think my RX is
really a step or two beyond the converter- DC equivalent. First, we
have the IF amp. This of course allows a better gain distribution and
avoids the heavy dependence on AF amplification that you have in DC
receivers. Then there is the product detector and BFO.

I've been less than thrilled with the DC receivers that I've used
(with the exception of the HW-8's rx!) but I really like my superhet
in the broadband mode. This morning I've been listening to the
W9NS/mm working VKs. Some sort of DX expedition en reoute to exotic
climes.

Receiver madness continues here. I was at a hamfest yesterday and
bought a couple of junky old AM/FM broadcast receivers with "extra"
(police, air, wx) bands. Couldn't resist. At the very least they
will serve as a source of Toko coils and transformers. Also got a
little TenTec SW regen.

73 Bill N2CQR

1515. Re: ? Yaesu FT50R ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: marc_k@walrus.com
Message-ID: <89dk5k$18n$3@alice.walrus.com>
Source record: 63020

narozny@c2i.NET wrote:
: I do wounder something: In the manual that came with my FT-50R, page 21 does
: it says "VFO Duplex mode" but it do not work in duplex mode but somehow in a
: cind of extended repeater shift. My question is; is it possibel to get this
: little radio to work like a real duples station so working the UO-14 FM, up
: 145.975Mhz and down 435.070Mhz? It is somehow more easy to do the job if you
: are abel to receive your own signal.

: Paul-Erik Narozny
: P.O.Box 209
: N-1541 Vestby
: Norway
: Phone: +47 6495 2778
: Fax: +47 6495 2777
: X-stream fax/answering mailbox: +47 21 51 53 98
: E-mail: la5hja@repairman.com

As the '50 is not a true dual-band unit, full duplex operation is not
possible...no matter what, if you are transmitting, no receive is
possible.
Some other dual-band radios can do it, unless they mute the receive on the
other band during transmit.
I know, for example that the ICOM IC-W2(probably IC-W2E, for you, here
it's the W2A) can do it.

1516. Re: ts-940 Shuts it self OFF!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Clif Holland <clif@avvid.com>
Message-ID: <38BA76BB.3787@avvid.com>
Source record: 63021

Roger Rives wrote:
>
> Hello I have a TS-940 that cuts its self off. You have to open the unit and
> reset the micro to get it to come back on. It seems to happen while adjusting
> knobs on the front pannel like the rit. please email any sugestions to
> kb5yxu@cs.com

What are you doing on the inside since there is not an internal reset???

Check the timer.

--
Clif Holland, KA5IPF
Owner of AVVid, an Authorized Kenwood and Icom Service Center
For more info click on the following
http://www.avvid.com/
or call 1-800-214-5779

1517. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: " A. Scott Chesnick" <chesnics@fido.nhlbi.nih.gov>
Message-ID: <38BA7A99.39FFA48F@fido.nhlbi.nih.gggov>
Source record: 63022
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Cortland Richmond wrote:

>
>
> Actually, the above is incomplete. There IS an effect, in which atoms
> subjected to a magnetic field will absorb radio waves of specific
> frequencies at lower ranges, but this involves (I think) resonating with
> the spin of protons in the nucleus. This is used in NMR imaging. I don't
> know what frequency a "normal" earth magnetic field would resonate,

2235 Hz give or take a few nano Tesla

Quoting from the Proton magnetometer Web
Pagehttp://hometown.aol.com/alka1/ProMag.html

"In the northern latitudes of the U.S. the total magnetic field strength is in the order of 50,000 to 55,000 nanoTesla and varies from location to location. Short period variations due to magnetic storms may reach several hundred nanoTesla. Diurnal variations caused by solar induced ionospheric currents are in the order of tens of nanoTesla. Presently, the long term trend of the total field is in the order of minus 90 nanoTesla per year (steadily decreasing).

The proton precession frequency detected by a suitable sensor in the geomagnetic field of the earth will be at a frequency in the audio range:

Example: 42.58 mHz / Tesla x 52500 x 1E-9 Tesla= 2235 Hz

The"Larmor frequency" defines the angular momentum of protons precessing in the presence of a magnetic field. There are currently quantum-mechanical views that explain particle precession, but a classical explanation seems a bit easier to follow.
A proton, a charged particle, may be thought of as having definite "spin" about an "axis" and acts as a small magnet. An externally applied magnetic field does not alter the spin rate, but causes the particle to wobble at a slower rate about an axis of precession. This axis tends to align with an external magnetic field. However in weak magnetic fields, any alignment tends toward randomness due to thermal effects and other molecular interactions. "

Another comment ....
On the antennas are that any gain in voltage is due to the local storage of the energy from cycle to cycle. The changing electromagnetic field is building up and collapsing about the antenna structure. This being analogous to "q" in a resonant coil.
Antennas have an aperture, effective height -area . The amount of energy a system can absorb depends upon the cross sectional area the antenna and the wavelength of the EMF. It cannot absorb any more energy then is available in the "near zone" of the

antenna structure. In the near zone the permeability and permittivity are not the same as free space.

There is a difference between a resonant magnetic circuit and an antenna.
A resonant coil or magnetic circuit stores the electric and magnetic field from a changing EMF.
An antenna will create EMF plain waves and the energy is radiated away.

In the near zone the antenna stores any absorbed energy.
The near zone or the inductive zone the electric and magnetic field can have phase relationships other then 90 degrees as in electromagnetic waves. Phase velocities in this close area can be superluminal and seemingly exceed the speed of light. This does not violate any of the rules of relativity this just means the energy wave can change its slope. The wave front does not travel at greater then the speed of light no information is passing from point --a to point-- b faster then light.
Any radiation created an antenna is lost to free space and is not stored from cycle to cycle of an oscillating EMF.
Any energy in the far zone does not interact with the antenna until it intersects the antenna- Because of the phase retardation and the electromagnetic wave electric and magnetic field have a 90 degree relationship. (The antenna cannot suck in energy from
the far zone until the energy actually gets to the antenna.) Then the amount of energy absorbed or radiated depends upon the physical dimensions and characteristics dependent upon the wavelength of the EMF.
One could view the amount of energy an antenna can absorb as the same as the amount of sunlight / energy that can pass through an open window. The amount of energy absorbed in any one moment is limited to this effective height or area and the amount of radiation passing through the opening.
If the antenna is part of a larger resonant cavity additional energy could be focused to one area just as a magnifying glass can focus light.
Regards Scott Chesnick

Design Engineer
In Vivo Center for Nuclear magnetic Resonance Imaging
National Institutes of Health
Bethesda, Md

1518. Re: SN76514

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: jbickel@iquest.net
Message-ID: <38ba7bb8.6260705@news.iquest.net>
Source record: 63023

All Electronics has the TL442 chip listed on page 84 of their latest catalog for $4.99. Ten Tec used it in the Corsair. Perhaps they have some of them.

1519. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89el5rdvb1@nnrp1.deja.com>
Source record: 63024
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38B992F4.DC3964E6@eznec.com>,
Roy Lewallen <w7el@eznec.com> wrote:

> However, some components of the EM wave change and fade very rapidly
> with distance from the antenna, so components and characteristics
which
> are significant or even dominant when close to the antenna are for all
> practical purposes nonexistent at greater distances. This allows
> simplification of the equations governing EM waves in the far field.
The
> factors important in the near field still apply, but in the far field
> they're so small they can be ignored with no practical loss in
accuracy.
> So in this sense the behavior of the EM wave is different in the near
> and far fields as Beaty said.

Right. The nearfield contains static and quasi-static fields,
while the farfield contains only EM waves, yet all of it is
contained under Maxwell.

Part of the reason I'm going on and on about this subject
is that *I* want to achieve a better understanding of this
nearfield stuff. Maxwell's equations describe it all, but they
don't automatically produce visual and verbal models. If
Maxwell's equations are the "bricks," then I want to understand
"architecture." A pair of loop antennas is not the same as
a transformer, and I want a clear understanding of the
difference. Strange things seem to happen when we place a
tuning capacitor across a loop antenna, and I want the strangeness
to be replaced by understanding. Nearfield stuff is muddy for
me, and I want a much clearer visual picture of how RF energy
gets from the wires to the empty space.

Debates about "crossed-field antennas" forced me up against
these very concepts, which helped alot. "Energy-sucking
antennas" is doing the same. Those papers about atoms and
light exposed parts of antenna-physics which I was totally
clueless about. On looking around, I see that I'm not the
only one.

I think it was Richard Feynman who said "if you don't have
three or four different ways of explaining something, then you
don't really understand it." Textbook explanations give one
way, but if we take them as the holy words of Authority,
we'll never encounter all the other ways. Non-traditional

explanations could be dismissed as needless eccentricity. I take the opposite stance: non-traditional explanations give you an alternate set of mental tools, and they fill in the gaps in traditional explanations. If the non-traditional viewpoints haven't been explored to death, maybe there are even some ideas for cool "toys" lurking unsuspected within them.

"Genius in truth means little more than the faculty of perceiving in an unhabitual way."
- William James

more quotes:
http://www.amasci.com/weird/skepquot.html

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1520. Re: QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <Sivu4.184$qw5.15262@dfw-service2.ext.raytheon.com>
Source record: 63025

In article <20000227010813.17169.00002098@ng-ci1.aol.com>, csusb4u@aol.com says...
>
>Having just passed my extra upgrade last week, I'd like to celebrate with the
>purchase of a good QRP kit. I'd prefer something with SSB/voice, but I'm not
>ruling out CW only rigs. I've heard lots of good press about the DSW-40, but
>wonder what else is out there. This would also be my first kit, although I've
>been soldering for years.
>
>Rich

Rich,

Look into the MFJ 94xx series "travel radios". They're SSB only from the factory, but have an optional CW adaptor. I talked to a station using one the other day, and it sounded great on SSB. I've also had several QSO with them on CW, and they do well there too. I've owned several of the MFJ 90xx CW-only QRP rigs, and they perform well too. The Ten-Tec CW QRP kits are well worth the money, as are the Small Wonder Labs kits (I have three of NN1G's rigs myself right now!).

73,
Dean, K5DH

1521. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89elgd$ea7$1@nnrp1.deja.com>
Source record: 63026
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag,sci.physics

In article <38B75B15.5468327B@usa.alcatel.com>,
Cortland Richmond <Cortland.Richmond@usa.alcatel.com> wrote:
> Ah yes, the Amateur Scientist. I remember they once had a series on
making
> your own hgh-quality vacuums. Started with refrigerator compressors
and went
> through mercury pumps for a hard vacuum.
>
> Interesting Web Page. Thanks!

I don't know if I mentioned this earlier. THE AMATEUR
SCIENTIST is going on sale. The whole thing is being
put onto cdrom by the SAS (Soc. for Am. Science) It's
not released as yet, but you can put in your order here:

TINKER'S GUILD: 70 years of "The Amateur Scientist"
http://www.tinkersguild.com

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1522. Dentron Multi PS20 Multimeter? Manual, INfo?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <38BAB6B4.7479DCE2@juno.com>
Source record: 63027

Dentron Multi PS20 Multimeter? Manual, INfo?

Looks like a nice meter, It includes a SWR / Power meter function. I would like to get a manual for it or any information. Thanks Art KF7GD

1523. FS: Vacuum Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <89f0k4mrj1@nnrp1.deja.com>
Source record: 63028

********** VACUUM VARIABLES **********

Jennings Vacuum Variables -- all used (or at least aged)

UCS-300 300pF 7.5KV $75 Front Flange w/mtng foot + gear
driven puller
UCS-300 300pF 10KV $125 Integral Front Flange + Puller

UCS-300-15S 300pF 15KV $250 with puller, later manufacture
(blue)
UCSL-750 750pF 3KV $200 with puller
CMV1-4000-0105 4000pF 5KV $250 Ceramic -- Spline shaft

R1G SPST 20KV 20Amp Vacuum Switch $100

---------Fixed vacuum caps----------

Jennings VC-12 12pF 20KV $25
D&W 75pF 20KV $40
Jennings 50pF 86KV $86
Western Elec 100pF 5KV $50 (This one hi-pot checked @ 14KV)

All of the above plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

1524. Ameritron AL81

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Dave Baker <davebaker1@home.com>
Message-ID: <QnAu4.25886$c7.707970@news1.rdc1.on.wave.home.com>
Source record: 63029

Does anyone know if the Ameritron AL811 can be modified to increase the output form 600 watts to 800 or higher.

Dave Mississauga

1525. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2802001530070001@dialup-1098.hip.cam.org>
Source record: 63030

In article <38ba91c5.153041756@news.erols.com>, n2cqr@erols.com (Bill Meara) wrote:

> On Sun, 27 Feb 2000 23:30:21 -0500, blackm00@cam.org (Michael Black)
> wrote:
>[stuff deleted]

> >If you read the text of the Mighty Midget, they tell you to reduce
> >the RF gain when tuning SSB. This was necessary so the BFO was strong
> >enough in reference to the incoming signal. If the ratio of
> >the two signals was wrong, the recovered SSB signal would be
> >distorted or completely unintelligeble.
>
> Michael: I've had to reduce RF gain very often when the SSB signals
> are strong. At one point I experimented with a more explicit
> capacitive coupling between the BFO and the IF amp, but for some
> reason it didin't work out and I went back to Lew's original scheme.
>
>
> 73 Bill N2CQR

Back in 1971 when I was 11, I bought a shortwave receiver. It was a Hallicrafters S-120A, pretty expensive for me, but just about the cheapest there was at the time. I've said it in other newsgroups, but it was the world's worst shortwave receiver.

It was lousy for a lot of reasons, but one thing it definitely couldn't do was receive SSB, even though it had a BFO. I can't remember whether I figured out the problem myself, or read something and realized that was the problem. I do recall having the impression that the SSB signals were too strong. Whatever happened, I took a potentiometer I'd taken out of some junk piece of equipment, and used it as an attenuator at the antenna terminal. Suddenly, the receiver did work with SSB. However, by the time I'd attneuated the signals enough for the BFO to work, there were only a handful of signals that made it into the receiver.

The BFO was just not strong enough to properly beat with the incoming signal in the envelope detector. Attenuating the signal made the BFO strong enough.

This was the scheme that was in all the books up until AM receivers started fading away, under the topic of "tuning an SSB signal". Turn off the AGC, turn up the audio gain, reduce the RF gain. Up until SSB became common, receivers never had product detectors, and there was no problem with CW.

As a matter of fact, I was lucky because I went from that S120A to a Hammarlund SP-600, and it didn't have a product detector either, so I had to tune things the same way. But the Super Pro was a great receiver, so it all worked fine.

To fix the problem, one has to go to a product detector. And as already pointed out, that might be a problem in this case because the BFO signal gets coupled into the IF amplifier.

Michael VE2BVW

1526. CB frequency synthesizer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: John Cunningham <john.jc@virgin.net>
Message-ID: <GcBu4.1922$Dc5.47939@news2-win.server.ntlworld.com>
Source record: 63031

I have a number of scrap CB sets and wondered if I could make use of their frequency synthesizer chips (eg LC7137) for use in a homebrew receiver. Can anyone tell me a little info on these devices, such as what frequencies it can be made to generate, size of tuning steps, etc.
john.jc@virgin.net

1527. Re: Ameritron AL81

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Dan K Nelson <w6dkn@qsl.net>
Message-ID: <KHBu4.66$Gk1.4319@paloalto-snr1.gtei.net>
Source record: 63032

Dave Baker <davebaker1@home.com> wrote in message
news:QnAu4.25886$c7.707970@news1.rdc1.on.wave.home.com...
> Does anyone know if the Ameritron AL811 can be modified to increase the
> output form 600 watts to 800 or higher.
>
> Dave Mississauga
>
>

Sure, add more tubes, a bigger power supply, bigger filter caps, bigger diodes, bigger gauge wiring, etc. However, you are better of running it as it is. The difference between 600 watts and 1000 watts amounts to less than 1/2 an "S" Unit...

Now, if you take the money you will save on trying to squeeze a few more watts out of the amp, and work on making your antenna more efficient and lowering feedline losses, you can make a noticeable difference - both in transmitting as well as receiving...

73 de W6DKN

1528. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2802001545470001@dialup-1098.hip.cam.org>
Source record: 63033

In article <38ba93bb.153543771@news.erols.com>, n2cqr@erols.com (Bill Meara) wrote:

>[stuff deleted]
> BTW: I was thinking a bit more about our comparison between my RX in
> "wide" mode and a DC receiver with a converter. I think my RX is
> really a step or two beyond the converter- DC equivalent. First, we
> have the IF amp. This of course allows a better gain distribution and
> avoids the heavy dependence on AF amplification that you have in DC
> receivers. Then there is the product detector and BFO.
>
What I was really getting at was that you wouldn't have much selectivity, and definitely not single signal selectivity, once you bypassed the crystal filter. In other aspects, it probably is better than a straight direct conversion receiver, as you point out.

Like the direct conversion receiver, your selectivity with the crystal filter removed comes from the audio response, and the audio image is still there.

Single signal selectivity didn't arrive on the scene until some years after the superhet. I gather a major reason for Armstrong designing the superhet was to move the signal down to a lower frequency where it was easier to get gain back in those days, and putting most of the gain at a fixed frequency simplified things a lot. Sharp selectivity came later.

But that was so long ago, and we are so used to having narrow selectivity in the IF of a superhet, that saying "a direct conversion receiver with a converter" seemed like a way of describing things in a fashion that more could visualize.

There have been receivers described, and I thought Ten Tec even once sold a rig, which could be described as a direct conversion with a converter, or alternately a superhet with no IF selectivity. It just depends on how you look at it.

And of course, there have also been receivers that try to meld both, where they have a sharp filter in the IF, but very little IF gain. They make it up in the audio chain, just like in the direct conversion receiver.

> I've been less than thrilled with the DC receivers that I've used
> (with the exception of the HW-8's rx!) but I really like my superhet
> in the broadband mode. This morning I've been listening to the
> W9NS/mm working VKs. Some sort of DX expedition en reoute to exotic

> climes.
>
> Receiver madness continues here. I was at a hamfest yesterday and
> bought a couple of junky old AM/FM broadcast receivers with "extra"
> (police, air, wx) bands. Couldn't resist. At the very least they
> will serve as a source of Toko coils and transformers. Also got a
> little TenTec SW regen.
>
Keep an eye out for CB sets. They have narrower 455KHz ceramic filters
in them than AM broadcast receivers, and so they might be of use to
you.

Michael VE2BVW

1529. RF problems with keyboard and speakers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: Fred <fdecker@compuserve.com>
Message-ID: <89f3slhim1@ssauraab-i-1.production.compuserve.com>
Source record: 63034

My HF rig is basically incompatible with my keyboard and subwoofer speakers. Pretty much across the entire HF spectrum, I have various amounts of interference with both devices. My keyboard just stops working, all lights and keys become disabled, and my speakers "burp" loudly on voice peaks. I tried puting thick ferrite chokes on both ends of the keyboad to no avail and haven't done any bypass or anything to it or the speakers yet. I was hoping others had been this way before with millions of these things out there and could say, yeah, put a .1uf cap here and a toroid there and it will work just fine. I am only using 50-100 watts, but it still overloads my computer accessories. Thanks.

--
Fred
N4IXL
ICQ:10254840
http://members.aol.com/fdecker

1530. Re: Midland 70-340B VHF 2m convertion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-28 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <89etk5$50d$1@bbs.aeminium.pt>
Source record: 63035

cboone@earthlink.net wrote:
> I can program the EPROM as it sits on the plug in module!
> If you wish, contact me in pvt email and I will discuss details
> with you...did a lot of work on those radios back in the early
> to mid 80s..

Hello,
thank you for your reply!
We can talk over here if you don't mind since like this we
can share with other people who might be also interested.

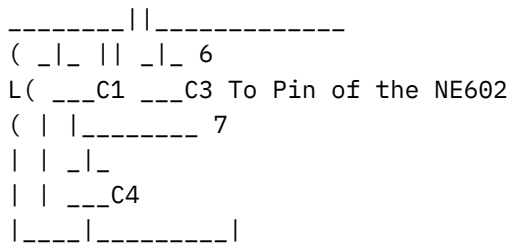
bye,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

1531. NE602 oszillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: albirdie@my-deja.com
Message-ID: <89grjnvad1@nnrp1.deja.com>
Source record: 62945

HI,

I want to build up a HF mixer with the NE602.
For the oszillator Philips shows a Colpitts oszillator.



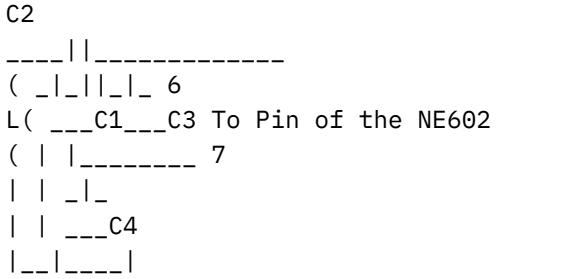
With the values of: L=1.5uH ; C1=7pF ; C2=100nF (!) ; C3=47pF ; C4=47pF
a oszillator frequency of ~20 MHz occurs. (proofed)
How do I calculate this ?
Thanks for your help!

-Hannes

Sent via Deja.com http://www.deja.com/
Before you buy.

1532. schematic again

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: albirdie@my-deja.com
Message-ID: <89gul9$1o0$1@nnrp1.deja.com>
Source record: 62946



Sent via Deja.com http://www.deja.com/
Before you buy.

1533. Last Day / Jennings Vacuum Variable / 3 Hr.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000229134112.15367.00000210@ng-df1.aol.com>
Source record: 62947

Jennings Vacuum Variable
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=264824687

1534. 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Tom Repstad <kb1cga@starc.org>
Message-ID: <38bc172a@news.together.net>
Source record: 62948

Hi Gang,

I'd like to build a linear using a 4CX1500b (have tube, socket, plate xfrmr, etc)... What I'm looking for is HELP! Schematics for a solid design using this tube. And any other info that might be helpful. This is my first linear project and I'd like it to not blow up when I plug it in :)

--Tom
KB1CGA

1535. Re: Info Wanted: Collins Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: crabtreejr@aol.com
Message-ID: <20000229135609.01250.00001658@ng-fo1.aol.com>
Source record: 62949

>Steve amradio@thebizlink.com on 2/29/00 8:35 AM CST wrote:

>Looking for info/specs on the following Collins Filters.
>
>F 455 Y 160 6438 ï¿½526 9343 00
nominal 16kHz @ -6dB, 27.5kHz max @-60dB

>F 455 Y 80 6438 ï¿½ 526 9341 00
nominal 8kHz @ -6dB, 18.5kHz max @-60dB

>F 455 Y 21 6419 ï¿½526 9337 00
nominal 2.1kHz @ -6dB, 5.3kHz max @-60dB

All case style Y, cylindrical 2&1/4" long, 7/16" dia typically with a mounting flange, but there was a style with an optional mounting bracket.

Insertion loss ???, maybe somebody else can help

73 John Crabtree

1536. Re: Ameritron AL81

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <38bc179f.229376@news.u-net.com>
Source record: 62950

exactly my sentiments as well Don. Well said. The diff between 600 and
800 watts doesn't amount to a hill of beans....

Larry MW0AWC

1537. YK-88C-1 500Hz CW filter wanted.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <89h8qn$t92$1@newsg1.svr.pol.co.uk>
Source record: 62951

I'm looking for a YK-88C-1 500Hz CW filter.
Details please to the address below.
Many thanks.

John.

john@mm1dsp.freeserve.co.uk

1538. Re: NE602 oszillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <dSZJFVAUfCv4EwiR@g0wbf.freeserve.co.uk>
Source record: 62952

In article <89grjnvad1@nnrp1.deja.com>, albirdie@my-deja.com writes
>HI,
>
>I want to build up a HF mixer with the NE602.
>For the oszillator Philips shows a Colpitts oszillator.
> C2
> ________||_____________
> (_|_ || _|_ 6
> L(___C1 ___C3 To Pin of the NE602
> (| |________ 7
> | | _|_
> | | ___C4
> |____|_________|
>
>With the values of: L=1.5uH ; C1=7pF ; C2=100nF (!) ; C3=47pF ; C4=47pF
>a oszillator frequency of ~20 MHz occurs. (proofed)
>How do I calculate this ?
>Thanks for your help!

25330/L(uH)*C1(Pf)pF = Fsquared
--
Barry McCarthy
G0WBF

1539. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Corky <corky@myremarq.com>
Message-ID: <0395071a.0358ac15@usw-ex0103-023.remarq.com>
Source record: 62953

Paul, Here is the url to a page with a one tube regen. It is a pretty crude but neato setup that I am sure you can modify for your needs.>>>http://www.ezlink.com/~crash/parks/1distget.html I believe I would buy commercial parts rather than making the caps and tuner assy,though making everything from scratch could add an element of satisfaction to the project. I bet that the tuner in this plan is a bear to tune satisfactorily.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

1540. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <89hf2t$330$1@SOLAIR2.EUnet.yu>
Source record: 62954
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1541. CAUTION, THIEF: VE7RPL

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: sabbatai_zvi@yahoo.com
Message-ID: <38bc5907.1737775@news.earthlink.net>
Source record: 62955
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

WARNING!!

The only time I ever got ripped off by a radio amateur,
was by VE8AA = VE7RPL

VE8AA
CHRISTOPHER PRINGLE
PO BOX 108
CROFTON BC V0R1R0
CANADA

VE7RPL ��
CHRISTOPHER PRINGLE
8116 EDMOND ST, PO BOX 723
CROFTON BC V0R1R0
CANADA

Use extreme caution when dealing with this individual!
He is very good at convincing you he is sincere,
but then your money will disappear and no radio will
ever arrive! The RCMP police cannot help you
either.

1542. FS: Gunnplexers 8 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: erniep <erniep@gateway.net>
Message-ID: <38BC6FCF.36CAF877@gateway.net>
Source record: 62956

I have 8 each Ma-Com Model MA-86501 Gunnplexers for sale.

The original specs were as follows:
Center Freq: 10.525GHz
Power Out: 5 to 10 mW Typical
Operating Voltage: 8.5 VDC @120 mA

These have the UG-39 (WR-92) Flange output. I have retuned all
of them to 10.400GHz at 7.5 VDC.

Price is $25 each Plus shipping and handling.

Please e-mail directly to k6ohh@qsl.net

Bob Partain K6OHH

1543. TRC 6-10 & TA6SI

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: OX3IO <ox3io@vind.gl_AntiSpam>
Message-ID: <KS_u4.872$Kw5.709@news.get2net.dk>
Source record: 62957

Hello !

I got these two kits, half finished, from another radioamatuer, but
unfortunally he could not find all the documentation.
The only thing I have is a quit unreadable part of the documentation for the
TRC 6-10 converter unit.

Can anybody mail me the documentation, and assembly instructions for these
two kits ?
I would be very happy for that.

Vy de OX3IO, Brian
Visit: www.ox3nuk.vind.gl

1544. Resending: Help on PI network tuning algorithm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Robert Fanfant <fanfant@ix.netcom.com>
Message-ID: <89hssa$62f@news.dns.microsoft.com>
Source record: 62958
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

I'm building a microprocessor based auto tuner and need help on
the tuning algorithm.

The tuner is a PI network (2 caps, 1 ind) with individual stepper motors for
both caps and inductor. I have a phase detector that tells me if the load
is too inductive or too capacitive. Also have an SWR detector that starts
the auto tuning process when it detects a high SWR.

Can anyone point me in the right direction to solve the tuning algorithm.
For example if the phase detector tells me that the load is too capacitive,
which cap should I rotate???

Can anyone tell me what "false" tuning points are?

-rob N7QT

1545. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89fm3h$54e$1@nnrp1.deja.com>
Source record: 63036
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <G3Kt4.11741$84.356258@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:
>
> Science Hobbyist wrote in message <897h2dogr1@nnrp1.deja.com>...

> > Yep, it's weird and counterintuitive. But it's not nonlinear.
> > It's like the example I gave with the capacitor: if you
> > charge a capacitor at a 1mA rate, with 1 volt across the
> > capacitor,
>
> That would require a current source composed of a dynamic, nonlinear,
> resistance.

Not exactly. We were talking about a carbon sheet with a
power supply connected across two edges. If I place two
small electrodes at the center of the sheet, and then connect
a big capacitor to them, what will occur? At first the
capacitor will act like a dead short, since the voltage across
the capacitor starts out at zero during the first instant.
There will be a relatively constant capacitor current because
of the carbon resistor, and because the voltage of the capacitor
is so tiny compared to the power supply that drives the sheet.
No fancy constant-current supply is needed, we just need a
power supply and a resistor.

As the capacitor voltage rises, the current through it DOES
NOT fall much, since the voltage across the capacitor is still
so small. For small capacitor voltage, the energy flowing
into the capacitor is roughly proportional to voltage. It's
this way because the capacitor voltage is rising, but the
current through it is only falling a tiny bit. Under
these conditions, if we wanted to force the capacitor to
gather energy at a faster rate, we could goose up its
voltage artificially. Within limits, the higher the
capacitor voltage, the greater the energy flow going
into it.

> > then you're pumping in a millijoule of energy per
> > second into the capacitor.
>
> The current source to charge that capacitor might have used 1 volt,
but you
> failed to spec the capacitor which I must assume was constant, as
E=1/2

Yes, the C is constant.

> CV^2. Now if C is constant, and the voltage is constant, the energy is
> constant too.

Definitely not. When a capacitor is being charged with a
power supply and a resistor in series, the capacitor voltage is
not constant, yet the capacitor current is almost constant.
Energy flow into the capacitor starts at zero (because the
capacitor voltage starts at zero, and energy flow is V x I.)
Then the energy flow rate rises because the voltage rises MORE
than the current falls (look at P = V x I.) Then the energy
flow into the capacitor reaches a peak and starts
falling. Eventually it decreases to zero again because
the capacitor voltage has settled at a maximum value, and
the current is zero. If you don't believe this, plug it
into a spreadsheet or a CAD program. Calculate the V x I for
the capacitor, and you'll see the incoming power rise, peak,
and fall.

This is all an analogy for the "energy sucking antenna", but I
think it's a good one. Something similar should occur when
a lossless resonator is first illuminated with EM waves:
at first the energy flows in fast, then there is a peak in
the flow, then the flow tails off as the resonator settles down
to a constant high value of internal energy.

The important part is right at the beginning, because the amount
of energy flowing into the resonator depends on the intensity of
the resonator's fields. The stronger the fields, the greater
the intercepted power. It's analogous to the early stages of
the charging capacitor: the greater the voltage, the greater
the energy flowing in.

> > But if you let the voltage across
> > the capacitor rise to 2 volts, then you're pumping in 2mJ
> > per second.
>
> You must be talking about a capacitor that is dynamicaly changing
> capacitance,

Nope. ALL capacitors do this. (However, I certainly
never encountered this concept in engineering school. I never
sat down and plotted the energy flow of a charging capacitor.
Heh. Back then I wasn't totally away that "power" meant
"energy flow rate.")

> that is nonlinear, because you keep a constant voltage across a
> capacitor as you increase the stored energy at a linear rate.

When an "empty" capacitor is first connected to a supply with
a resistor in series, the voltage goes up but the current does
not go down in proportion, therefore the amount of energy per
second flowing into the capacitor goes up. Another way to say

it: the higher the voltage across the capacitor, the faster
the energy comes in. (This only holds true until the
capacitor voltage becomes significant relative to the power
supply voltage.)

>
> > In the case of small resonant
> > antennas, if we let the AC fields around the antenna build
> > up to a high level, then the antenna gathers energy at a higher
> > and higher rate, but only until the surrounding fields start
> > to affect the "power supply" and prevent further gains in
> > power reception.
>
> Now we're talking about a different situation, with an LC and
sinusoid.

Yes, different. The capacitor is only an analogy. But
not so different that the analogy evaporates.

The
> LC will 'ring up', initialy presenting a greater load to a source
delivering
> a constant voltage. Now I see what you mean, I think. You mean that
the
> power extracted from the incident field is dependant on the energy in
the LC
> tank.

Exactly. However, in the case of the antenna, we have some
three-dimensional field patterns, so it doesn't behave exactly
like a signal generator connected to a tank circuit through
a resistor. With direct wire connections, the ratio between
the voltage of the signal generator and the voltage of the
tank circuit is the determining factor. With an antenna, the
SHAPE of the fields (their broadside area, to be specific)
becomes important too.

> Considering a sinusoidal field potential, and a sinusoidal tank
> voltage of equal value, there be no energy or complete energy
extracted
> depending on relative phases, of 0 or 180 degrees respectively. OK.

It also depends on the amplitude of the current in the loop
antenna (or, if its a short dipole, it depends on the voltage
across it.) If the resonator hasn't "rung up" yet, then it is
not yet generating its own fields, therefor the incoming EM
waves are unaffected, and they pass right by it without
being absorbed. To be absorbed, they have to flow TOWARDS
the body of the resonator and not just flow along undeflected.
Only when the strong fields of the resonator are superimposed
with the fields of the incoming EM waves do we have energy
flowing INTO the tiny resonator.

Yes, all this is very weird. It's like putting a bucket out
in the rain, and discovering that a full bucket gathers more
rain than an empty one!

>
> This has nothing to do with "concentrating the Poynting vector
> flux..."sculpting" the e-fields and b-fields of the
> incoming EM waves in order to direct the flow of energy inwards
towards the
> antenna." Or, IMHO what goes on with atoms and photons. Your arguement
> involve changing the potential difference across circuit elements. I
think
> what happens with atoms and photons is a changing of the properties
of the
> vacuum, a warping of space-time for the EM poynting vector and
dynamic E and
> B fields.

If the e-fields and b-fields of the tiny resonant antenna are
the reason that EM waves flow into that antenna, then no
spacetime warping is needed. And, if no spacetime warping is
needed for small resonant antennas, it *MIGHT* be true
that individual atoms use similar physics.

> > This occurs naturally in a resonant
> > circuit, so we don't have to artifically drive a coil with a
> > power supply in order to see the "energy sucking" effect (but
> > we could do so if we wanted to.)
>
> I don't think so. If you don't criticaly damp, that is conjugate
match,
> absorb all the energy from the LC antenna, it
> will not cancel the field as you think.

You are right. The "lossless resonant antenna" requires a
load, otherwise it will become "full" and will stop absorbing
energy. However, the load resistor has unexpected effects.

Here's ANOTHER way to look at it. Suppose we have a simple
loop antenna (electrically small, not resonant.) Suppose
we illuminate it with EM waves. We can put a variable
resistor across it and adjust the resistor for maximum
received power. Matching the load impedance, obviously.
OK, now put a capacitor across that loop antenna and tune
it to resonance with the incoming waves. Finally, adjust
the load resistor to achive maximum power. You'll find
something very strange: the resistor value is very different
than with the non-resonant antenna (I mean WAY different), and
also the received power is much, much higher. This is not
just an example of impedance matching, since the resistor
in both cases was adjusted to match the antenna impedance.
Adding the capacitor did something odd. It increased the
antenna's coupling to space, as if the antenna had become

larger.

> If you let it ring up to the
> incident field potential and cease to absorb power. How do you get a
180
> degree phase shift field without constantly supplying the energy to
do it,
> and then radiating away that energy? It sounds like your talking about
> active signal cancellation. What wonderfull stealth that trick would
make!

Right! As far as I know, it really works this way: an array
of tiny antennas can act as an absorber-sheet, even though there
are huge empty spaces between the antennas. The stored energy
in the resonator makes the antenna behave like an actively-
driven device. (Unfortunately its a narrow-band phenomenon.)

>
> Consider an electron with its relatively powerfull magnetic and
electric
> potential, and its wavefunction. An incident photon impulse causes it
to
> ride the wave, and if the (DeBroglie?) wavelength is in phase, it
gets stuck
> in a new orbit, otherwise it falls. As the electron moves, it actively
> cancels the incident field with its powerfull potential, and stores
it in
> the potential energy of its orbit (or resonance).

Yep. The "resonant antenna" idea comes into play if we can
cause that electron to "slosh" much farther from the nucleus
than usual. When its close to the nucleus, its field is
partially canceled, but if we can give it some resonant
pumping, its field can expand out into space far from the atom,
and that means its field can interact better with EM waves.
That's the "energy sucking antenna" phenomenon in action.

Of course it would be best to just get rid of the positive
nucleus and let the waves hit the electron directly. An
antenna composed of uncancelled electrons would be REALLY
effective. But if the darned electrons insist on staying
near protons, then the next best thing we can do is to
get them "swinging", so they spend as much time as possible
lifted far outwards away from the protons, so the EM waves
can "see" them.

> > If this happens, it means that the fields must be intense enough
> > to make space go nonlinear. (Don't solitons only travel in
> > a nonlinear medium?)
>
> Yes, sort of. Nonlinear as in changing Mu0 or E0, as ferromagnetic and
> ferroelectric ceramics do near saturation, no. You would see lasers

> intermodulating and frequency dispersion and stuff. The nonlinearity
I'm
> talking about is like the nonlinearity of the Lorentz transform in
Special
> Relativity, where fields are bent and distorted, as energy (Poynting
vector)
> changes from dispersing as transverse waves in 3d space to higher
> dimensional longitudinal waves, which in turn can warp the transverse
waves.
> Energy knots can form. Fast rates of change are required, as we don't
see EM
> solitons short of Maser emissions (that I'm aware of).

Doesn't this require some modification to Maxwell's equations?

Nikola Tesla claimed to have achived a "bubble" effect which
could apply forces against solid matter. If he really did
this, then maybe the effect can be demonstrated with
desktop equipment, if we knew the right combinations of
coils, plates, and drive waveforms. Maybe there is a "standing
wave" version of your EM solitons. In particular, if one EM
soliton can reflect off of another, it might be possible to
generate a sphere-shaped structure made of soliton-stuff, where
the shell of the sphere keeps the solitons bouncing around
inside. If atoms are these, except with high frequency and
smaller size, then maybe it's possible to generate a stable
"VHF atom" which is many inches in diameter? Star Trek
technology, obviously!

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1546. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89fm6n$56c$1@nnrp1.deja.com>
Source record: 63037
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <8996h2$1f9$1@SOLAIR2.EUnet.yu>,
"DrMilankov" <yod@eunet.yu> wrote:

>
> Hi there, I work on it!

Work on what? Do you work with resonant antennas?

> Science Hobbyist <bbeaty@microscan.com> wrote in message
> news:88uuscirk1@nnrp1.deja.com...
> >
> >
> > Here's some weird ramblings I've posted on my site:
> >
> > ENERGY-SUCKING ANTENNAS (electrically small resonators)
> > http://www.amasci.com/tesla/tesceive.html
> >
> >
> > MORE MUSINGS ABOUT ENERGY-SUCKING ANTENNAS
> > http://www.amasci.com/tesla/tescv2.html

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1547. Tektronix 310 Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Dan Reynolds <bcdlr13@home.com>
Message-ID: <aNGu4.39405$2C1.1084524@news1.rdc1.il.home.com>
Source record: 63038

Anybody got a schematic for a Tektronix 310 scope? It is an oldy.

Dan Reynolds
spambcdlr13@home.com
(remove the word spam from the email address)

1548. Misc. Equipment 4 Sale !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: radiodoc37@aol.com
Message-ID: <20000229002842.01225.00001068@ng-fs1.aol.com>
Source record: 63039

----> Equipment For Sale <------

Yaesu FTDx560 HF Tube Transceiver 10-80 meters,
plastic still on faceplate, excellent condition-
with copy of manual $250.00 (Pending Sale)

RT-524 30-76 Mhz Military FM transceiver, Good condition an 8 on a 1-10 scale,
No nomenclature tag (desirable for collectors) Replaced with Serial Tag.
Manuals and original mic. $500.00 See Fair Radio Catalog for more info. Their
Price $625.00-$675.00

Swan 1200W 10-80 Meter Amplifier, Very Clean Condition, Uses 4 6LQ6 Tubes
With Manual. $250.00 Obo Pic will be on the WebSite Soon! Will trade for a
Kenwood TS520.

Yaesu XF-32A SSB filter for FT101 series, $40.00

Tram D201 Parts, Wood End Caps, Meters, Crystal/selecter Board, Transformers,
Face Plate, Knobs, crystal filter, Etc... Inquire with your needs,.

Misc. 24V Switching power Supplies, Cosel, Power One Etc... Most new in the box

Crown IC-150 Stereo preamplifier, Metal cabinet
model with copy of manual $150.00 Obo

Midland 79-290, removeable face 10/11 meter AM/SSB/WX
Mobile,dual final design, 5 bands, WX, good condition with
stock mic. $110.00 Reduced!

Commercial VHF Handhelds:
Motorola Radius P50 (Weak Battery)
Kenwood TK240 with drop in charger, great battery, great condition.
Reasonable offer

Homebrew 3 tube 10 meter amplifier, uses 3 military
versions of the 6146, Seperate open chassis PA and
power supply deck. RF sensing, Plate Load, meter, SSB
and AM. 150-200 watts with low drive $130.00 Reduced to $100.00

Misc. Vacuum tubes (No Sweeps right now) See WebSite

Kenwood TS430, with AM filter and FM board, Manuals, Clean and working Great
$400.00 (Pending Sale)

Browning Mark III receiver, excellent condition $140.00

Browning Mark III Transmitters, Make one good one from the two units $110.00

The above Brownings can be seen on the website

Icom IC-230 with manual, mic and mobile bracket. not working correctly, VCO unlocks but in great cosmetic condition,, $30.00

Browning Mark III Receiver, Browning Mark III AM Transmitter, Very Clean! and D104 Mic $250.00 Pic will be on the Website Soon !

Tram D201s, Both have unlocked VFO's, One has lower freqs
with good AM and weak SSB the other has upper freqs with good
AM and SSB. Both in good condition $250.00 Each

Penetrator HB-150 10/15/20/40 meter Mobile amplifier, 150 watts class AB1
Low drive input required $150.00

Yamaha FG-460S-12S, 12 String Guitar, Beautiful guitar, near flawless, Gold hardware, Pearl inlay, Seymore Duncan Acoustic Pick-up, Hard Case $350.00

Hooker 10 meter Amplifier, 1 pill design, PEP and RMS mode, CW/AM/SSB, Preamplifer, Clean, still has factory seals $75.00

Pacifc Scientific / Superior Electric 2 Axis Servo System $250.00

Tram Diamond 60 AM/SSB Mobile, SIltronics Model 90 VFO -3 and Paradynamics Meter, All in good working condition $175.00

VHF Trielectric Amplifier 13.8 VDC As Is $40.00

Motorola UHF 13.8 VDC 450-470 Mhz Solid State Amplifier, Surplus, As Is $40.00

Alan K1313 10 meter Single Tube Modulator With Spare 6KG6 tube, New Russian tube installed, Spare is 90% or better, Clean and works Great! $150.00

Johnson Messenger 250 Base, With Original Box and Manual $75.00

Astatic 10DA Mic Head, Works and looks good, Missing the locking Ring but plugs right into a D104 Stand $30.00

Fentone 500C Studio dual crystal Mic Head On a TUG8 D104 Stand, Wired to a Demco Tube Modulator. Smooth Clear Audio! $200.00 Obo

Pentax K1000 35mm Camera, Wide and normal lens, 2x teleconverter. Cokin filter holder with flare guard. Several special effect Cokin Filters, polorizers and acessories, carrying case etc... $250.00 Obo

SBE Trinidad , 23 channel base CB, near perfect condition, original manual $70.00

Fluke 8050A Digital Desktop Multimeter, AC/Batt, needs new batt. but works great on AC $50.00

NF Circuit Design Block Model CR-116 Low Distortion Signal Generator, $125.00 Obo

Misc, Yaesu FT101 Components and parts, Misc untested boards Email If you need something.

Electrovoice Mic.... See Website!

Misc 19" Racks..... Email for Details

Will Trade For Mustang 5.0 Parts Or Kenwood TS520

To see this Equipment and More equipment and Pics go to:

http://members.aol.com/radiodoc37/indexdoc.html

Modified components to build your own Rife-Bare
Resonant Frequency Therapy Machine, Modified
ISM transmitter, Modified Class C amplifiers,
And a variety of Plasma Tubes. Built and tested
systems available.
To Learn about Plasma Wave Therapy See My site:

http://www.medicineofthefuture.com

All items shipped UPS ground after reciept
of MO Or cleared Ca. Check.
Thanks
Mike N6KYD (805) 526-5487

1549. Re: QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: meas+ures@vcnet.com
Message-ID: <meas+ures-2802002346570001@port80.dial.vcnet.com>
Source record: 63040

In article <20000227010813.17169.00002098@ng-ci1.aol.com>, csusb4u@aol.com (CSUSB4U) wrote:

> Having just passed my extra upgrade last week, I'd like to celebrate with the
> purchase of a good QRP kit. I'd prefer something with SSB/voice, but I'm not
> ruling out CW only rigs. I've heard lots of good press about the DSW-40, but
> wonder what else is out there. This would also be my first kit, although I've
> been soldering for years.
>
> Rich

 Using less power than is needed to communicate comfortably is clearly a torment to others. // One summer evening on 75m, a QRP proponent broke into our SSB-VOX group. Within the first minute he launched into a painfully long Lock to Talk diatribe about the evils of high power. We switched to USB and continued as before while he blathered away on lower. If it turns out that there is a place called Hell, it seems quite likely that it will be inhabited by those who found comfort in the torment of others..

--
- Rich... 805.386.3734.
www.vcnet.com/measures, remove plus from adr.

1550. Re: CB frequency synthesizer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38bb1883.29393769@news.online.no>
Source record: 63041

On Mon, 28 Feb 2000 20:47:18 -0000, "John Cunningham"
<john.jc@virgin.net> wrote:

>I have a number of scrap CB sets and wondered if I could make use of their
>frequency synthesizer chips (eg LC7137) for use in a homebrew receiver. Can
>anyone tell me a little info on these devices, such as what frequencies it
>can be made to generate, size of tuning steps, etc.
>john.jc@virgin.net
>
>
believe RSGB has a CB-conversion manual available, see www.rsgb.org
but don't expect too much quality from such equipment, they are
usually made as cheap as it is possible to play with

73 jan-martin
LA8AK

1551. Re: Tektronix 310 Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38BBF218.1A71C4B3@home.com>
Source record: 63042

try w7fg.cm or tucker electronics. I've been pleased with the service
from both.

Dan Reynolds wrote:

> Anybody got a schematic for a Tektronix 310 scope? It is an oldy.
>
> Dan Reynolds
> spambcdlr13@home.com
> (remove the word spam from the email address)

1552. Cheapie Quickie Ten-R

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Rooster <bullmeat@my-deja.com>
Message-ID: <89gmvvris1@nnrp1.deja.com>
Source record: 63043

I built the Cheapie Quikie Ten-r QRP transmitter,it works great.I need help to connect a tone generator to it.I built the tone generator but don't know how to connect it to the transmitter.Any help is appreciated.

Sent via Deja.com http://www.deja.com/
Before you buy.

1553. Info Wanted: Collins Filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-02-29 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-1FC654.09350529022000@news.erols.com>
Source record: 63044
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Looking for info/specs on the following Collins Filters.

F 455 Y 160 6438 ♦526 9343 00
F 455 Y 80 6438 ♦ 526 9341 00
F 455 Y 21 6419 ♦526 9337 00

1554. Cheapie Quickie Ten-r

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Rooster <bullmeat@my-deja.com>
Message-ID: <89hqsa$me6$1@nnrp1.deja.com>
Source record: 62959

Built the Cheapie Quickie Ten-r QRP transmitter,works great,Now I want to add a tone generator to it.I built a tone generator with a 555 but don't know how to connect it to the transmitter.Any help is appreciated.

Sent via Deja.com http://www.deja.com/
Before you buy.

1555. Repeater controller circuit???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <vh%u4.12016$e53.476241@news20.bellglobal.com>
Source record: 62960

Can any tell me where I can find a homebrewed repeater controller. I don't need anything too fancy. I would just like it to have a courtesy tone, and an automatic link timer shut off. Thanks in advance.

Bill

1556. ctcss to make

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: A320 Systems <sleesa@powerup.com.au>
Message-ID: <38bc8814@grissom>
Source record: 62961

Can any body please tell me how to make a ctcss encoder or give me the chip numbers to build one.

Stewart

1557. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <SN0v4.36653$3b6.169645@ozemail.com.au>
Source record: 62962

I would use a G3SEK tetrode board, this board will give your tetrode good protection. It is available in the USA. It has screen and grid regulators plus numerous protection measures. A good product overall, although there is some messing about when you want to use different screen voltages, pity they did not specify all the component values for all the popular tubes. My only criticism for this board which is sold as a complete sollution.

Tom Repstad <kb1cga@starc.org> wrote in message news:38bc172a@news.together.net...
> Hi Gang,
>
> I'd like to build a linear using a 4CX1500b (have tube, socket, plate xfrmr,
> etc)... What I'm looking for is HELP! Schematics for a solid design using
> this tube. And any other info that might be helpful. This is my first linear
> project and I'd like it to not blow up when I plug it in :)
>
> --Tom
> KB1CGA
>
>

1558. Kenwood TS-850SAT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: narozny@c2i.NET
Message-ID: <002d01bf8342$440dd2a0$2bd4d9c1@skrue>
Source record: 62963

I have a Kenwood TS-850SAT and this radio have a "oscillateing" output. In FM it is wery obvious but i have also seen it on RTTY. At 50 Watts output FM does the output goes from one white dot below where the read dots start to one read in the meter. It is also visibel on a external meter and on the current drain from my power. The power drain from the power supply is not to high. It is normal and it not too much to handel for the powersupply either. I do hope that someone on the list may give me an idea of what the trouble may be.

Please answer me of the list at la5hja@repairman.com

Paul-Erik Narozny , LA5HJA

1559. Re: QRP - What should I start with?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: maddog@io.com
Message-ID: <38bcd5a7.529641005@news.io.com>
Source record: 62964

On Tue, 29 Feb 2000 07:46:01 GMT, meas+ures@vcnet.com (R. L. Measures) wrote:

>Using less power than is needed to communicate comfortably is clearly a
>torment to others. // One summer evening on 75m, a QRP proponent broke
>into our SSB-VOX group. Within the first minute he launched into a
>painfully long Lock to Talk diatribe about the evils of high power. We
>switched to USB and continued as before while he blathered away on lower.
>If it turns out that there is a place called Hell, it seems quite likely
>that it will be inhabited by those who found comfort in the torment of
>others..

Rich, I certainly share your disdain of rude operators, including this QRP op.

But I would not want newcomers to think that yours is the majority view about receiving QRP. Throughout my years of operating in the 50-100 w output range, I have gained particular pleasure in the challenge of copying somebody who had the "audacity" to call me with their 1 watt rig. I qso'ed someone the other day running 500 mW from 1200 miles away, for over 30 minutes on 40 meters. That was just plain fun! Granted, it won't be fun for everybody, but then there's nothing in the FCC rules or amateur code that says you have to answer a call from an s3 signal. Still, if all you want is armchair copy, you're excluding an awful lot of grassroots ham radio activity. Your loss...

73,
monty N5FC

1560. Re: NE602 oszillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: albirdie@my-deja.com
Message-ID: <89isqgdck1@nnrp1.deja.com>
Source record: 62965

In article <dSZJFVAUfCv4EwiR@g0wbf.freeserve.co.uk>,
Barry McCarthy <barry@g0wbf.freeserve.co.uk> wrote:
> In article <89grjnvad1@nnrp1.deja.com>, albirdie@my-deja.com writes
> >HI,
> >
> >I want to build up a HF mixer with the NE602.
> >For the oszillator Philips shows a Colpitts oszillator.
> > C2
> > ________||_____________
> > (_|_ || _|_ 6
> > L(___C1 ___C3 To Pin of the NE602
> > (| |________ 7
> > | | _|_
> > | | ___C4
> > |____|_________|
> >
> >With the values of: L=1.5uH ; C1=7pF ; C2=100nF (!) ; C3=47pF ;
C4=47pF
> >a oszillator frequency of ~20 MHz occurs. (proofed)
> >How do I calculate this ?
> >Thanks for your help!
>
> 25330/L(uH)*C1(Pf)pF = Fsquared
> --
> Barry McCarthy
> G0WBF
>

You mean: f = 1 7 (2*Pi*sqrt(L*C1))

I thought so too, but C3, C4 and the (unknown) input capacitance
of the NE602 is involved too.

-Hannes

Sent via Deja.com http://www.deja.com/
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1561. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: albirdie@my-deja.com
Message-ID: <89iveletv1@nnrp1.deja.com>
Source record: 62966

Hi Paul!

I have some links about regenerative receivers on my links page.
In my opinion they are not difficult to build.
look at http://www.geocities.com/rekrut_mayer

-Hannes

Sent via Deja.com http://www.deja.com/
Before you buy.

1562. Building a UHF Repeater? I have a ~/\/\~UHF Duplexer FS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: msisco9939@aol.com
Message-ID: <20000301061758.01310.00001612@ng-fk1.aol.com>
Source record: 62967

Yep:

I have found a few more Motorola (Made by Celwave) Duplexers for those who are interested in building there own UHF repeaters. These are from GR300 Portable Repeaters. I have 3 availible at this time.

Picture can be seen @

http://www2.4dcomm.com/metrotech/celwave2.jpg

Asking $195.00ea+8.00 for shipping and handling

Terms:

Acceptable PrePayment in the form of a Postal Money Order (If immediate shipping is desired) or a Personal / Business check is A-OK too if you do not mind a Short Shipping Delay due to bank processing time. This is required only the first time or two as once you are in the data base, PrePayment is no longer required

Monty

1563. 4XC1500B & Socket

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Tom Repstad <kb1cga@starc.org>
Message-ID: <38bd26e6@news.together.net>
Source record: 62968
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

4CX1500B (Medical Pull) & Socket $150.00 + Shipping

E-mail if interested.

--Tom
KB1CGA

1564. Iambic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <robv4.1123$F06.22459@typhoon.ne.mediaone.net>
Source record: 62969

I am looking for instructions for building a non PIC electronic iambic keyer.

If any one can help you can post to the newsgroup or send your replies to kb1dhb@qsl.net.

Thanks

Drew Leavitt
KB1DHB/AA
kb1dhb@qsl.net

1565. impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38BD4460.D2C63363@bright.net>
Source record: 62970

Am I correct in my analogy? I have a circuit succeeding an NE602 mixer but I am not sure it presents the proper impedance to the 602 (1500 ohms). If I watch the output of the 602 with a scope and shunt a variable resistance across it until I see half the original p-p waveform then that resistance value should be approx.the impedance across the output.

The reason I want to check this is I have a mixer that appears to be working okay but the output is down. The input is -20db which is the compression point of the 602 and the output is barely above that but the rated gain of the 602 is supposed to be14 to 17db. Looking at the schematic of a 602 I don't really see how if it has a bad transistor I am getting good mixing characteristics. Gain and mixing should go hand in hand with the 602 so I am left wondering about proper impedance termination.
Any thoughts?

Paul

1566. WTB: jack bars for BC-610 style of coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000301122207.11038.00001349@ng-dd1.aol.com>
Source record: 62971

Prefer new or like new.

73

Evan

1567. Re: impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <89jls1vgj1@nnrp1.deja.com>
Source record: 62972

In article <38BD4460.D2C63363@bright.net>,
Paul Martin <pmartin@bright.net> wrote:
> Am I correct in my analogy? I have a circuit succeeding an NE602
mixer
> but I am not sure it presents the proper impedance to the 602 (1500
> ohms). If I watch the output of the 602 with a scope and shunt a
> variable resistance across it until I see half the original p-p
waveform
> then that resistance value should be approx.the impedance across the
> output.
>
> The reason I want to check this is I have a mixer that appears to be
> working okay but the output is down. The input is -20db which is the
> compression point of the 602 and the output is barely above that but
the
> rated gain of the 602 is supposed to be14 to 17db. Looking at the
> schematic of a 602 I don't really see how if it has a bad transistor I
> am getting good mixing characteristics. Gain and mixing should go hand
> in hand with the 602 so I am left wondering about proper impedance
> termination.
> Any thoughts?
>
> Paul
>
>

Your reasoning is ok. But why don't you load the IC with 1,500 Ohm and
see whether it outputs the correct signal?
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1568. Re: NE602 oszillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <DBz+hDA8ERv4Ewx4@g0wbf.freeserve.co.uk>
Source record: 62973

In article <89isqgdck1@nnrp1.deja.com>, albirdie@my-deja.com writes
>>
>> 25330/L(uH)*C1(Pf)pF = Fsquared
>> --
>> Barry McCarthy
>> G0WBF
>>
>
>You mean: f = 1 7 (2*Pi*sqrt(L*C1))
>
>I thought so too, but C3, C4 and the (unknown) input capacitance
>of the NE602 is involved too.
>

True Hannes, but C1 L1 are the major frequency determining components,
so the formula will give a figure which is near enough to be able to
trim by removing a few turns, or adjusting the coil core.

--
Barry McCarthy
G0WBF

1569. WTD: BAND SWITCH or parts for DENTRON CLIP L amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: pobox11@ezy.net
Message-ID: <38be6442.1475490@news.ezy.net>
Source record: 62974

http://www.ezy.net/~pobox11

"I also will choose their delusions, and will bring their fears upon them, because when I called, none did answer; when I spoke, they did not hear.."..Isaiah 66.4

1570. Re: impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38BD6717.29A1E63E@bright.net>
Source record: 62975

>
> Your reasoning is ok. But why don't you load the IC with 1,500 Ohm and
> see whether it outputs the correct signal?
> --
> Greetings,
>
> Luiz - PY1LL
>
> It's surface mount and I hesitate to undo anything unless I actually have
> to change the chip.

Paul

1571. Re: Resending: Help on PI network tuning algorithm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: jlisson@earthlink.net
Message-ID: <38bd71a8$1$wyvffba$mr2ice@news.earthlink.net>
Source record: 62976
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

>I'm building a microprocessor based auto tuner and need help on the
>tuning algorithm.

>The tuner is a PI network (2 caps, 1 ind) with individual stepper
>motors for both caps and inductor.

>Can anyone point me in the right direction to solve the tuning
>algorithm. For example if the phase detector tells me that the load is
>too capacitive, which cap should I rotate???

>Can anyone tell me what "false" tuning points are?

>-rob N7QT

What is the "source" for the RF? Will there be two "tuners" used, one in the transmitter and one in the feedline, perhaps at the antenna?

In the really old days we would tune for max RF current in the line.

(In the not quite so old days we monitored the final plate current and tuned for a dip, but that was when radios glowed in the dark)

In the old days the setting of the series "L" arm is determined by the band.

You start with the output "loading" capacitor fully meshed.

You now adjust the input "tuning" capacitor for maximum line current.

Increase the loading, by reducing the output "loading" capacitance in small increments, while simultaneously maintaining the maximum line current by adjusting the input "tuning" capacitor.

At some point, further loading adjustments will not increase the line current. This indicates some combination of the maximum coupling range of the PI network and/or the maximum power output of the RF source.

If you use a modern auto-tune transmitter I would suggest you first adjust it for rated output into a 50+j0 ohm dummy load.

Now turn off the auto tune feature, connect the PI+feedline+antenna, and see if the PI network adjustment described above can transform the actual load "seen" at the shack end of the feedline into something close to 50+j0 ohm's that the transmitter is tuned for.

After the "best" match is achieved from the PI, the auto-tune of the rig can once more be enabled with perhaps a wee-bit more output power.

Using proper components to build the PI network and selecting the optimum length of the feedline (determined by the actual antenna characteristics) you should be able to load almost anything from a beam to a flag pole.

>I have a phase detector that tells me if the load is too inductive or
>too capacitive. Also have an SWR detector that starts the auto tuning
>process when it detects a high SWR.

Taken out of context and by themselves there is no such thing as "too much reactance" nor is there "too high" a SWR.

Any antenna+feedline will result in a complex impedance and SWR (as "seen" by the transmitter) that can be "calculated" with reasonable ease. Unless your calculations are wrong or the physical plant is defective (broken wire, bad solder joint, calculating in meters and measuring in feet) then only if the complex impedance at the shack end of the feedline is beyond what the "tuner" can handle is there too much reactance, too high/low a resistance.

This is a deficiency of the tuner.

This deficiency can be compensated for by adjusting feedline length. (in most cases) See the "all band" system that Cecil uses as an example.

-Jim WA2CEP

--
---
jlisson@earthlink.net

1572. Electronic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <6Oev4.1580$F06.23540@typhoon.ne.mediaone.net>
Source record: 62977

I should just say I am looking for an electronic keyer, no need for it to be iambic.

> I am looking for instructions for building a non PIC electronic iambic
> keyer.

Drew
KB1DHB/AA
kb1dhb@qsl.net

1573. Re: Resending: Help on PI network tuning algorithm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: W6RCecilA <Cecil.A.Moore@IEEE.org>
Message-ID: <38BD88E5.49D815A0@IEEE.org>
Source record: 62978
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Robert Fanfant wrote:
> Can anyone point me in the right direction to solve the tuning algorithm.
> For example if the phase detector tells me that the load is too capacitive,
> which cap should I rotate???

One solution is to turn your pi into an 'L' with the cap being switched
from input to output as needed. This greatly simplifies the tuning
algorithm.
--
73, Cecil, W6RCA http://www.mindspring.com/~w6rca

1574. Re: ctcss to make

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Geert Jan de Groot <nomailplease@spambait.org>
Message-ID: <89k9jvmmv1@porthos.nl.uu.net>
Source record: 62979

> Can any body please tell me how to make a ctcss encoder or give me the chip
> numbers to build one.

The easiest way is to look for 'communication specialists' modules;
HRO sells these. They are itty bitty modules, small enough to put
in nearly all equipment (I have an en/decoder that is the size of a
postage stamp).

As to chips, Consumer Microsystems Limited (CML, http://www.cmlmicro.co.uk/)
is about the only game in town. The easiest way was the FX365 , but that
is being phased out; the newer chips are much nicer but probably
need a microcontroller to drive them.
The bad news about CML is that their distribution mechanism is really bad:
because they mainly sell to specialized users, getting these chips
in small quantities is a real pain.

A third possibility is a square wave generator with a stiff low-pass
filter (such as an MF6 or thereabouts). Since square waves only have
odd harmonics, filtering is not hard.

A fourth possibility is using a twisted-ring counter with weighted
resistors to build a D/A converted that generates sine waves;
see page 667 of 'the art of electronics' (if you don't know the book,
purchase one!)

A fifth possibility is what I am currently experimenting with
for a repeater, using a one-bit output from an EPROM and average
the bit stream. Basically, I read out an EPROM at 250 KHz and
use a simple RC filter to average out the ones and zeroes
into a sine wave. The advantage is that it's all-digital
(no critical resistors, no pots), the frequency is crystal controlled,
and the distortion is _very_ low. I get the tones for ID etc for free
and use the EPROM to supply signals for a switched capacitor
filter for CTCSS decode.

73,

Geert Jan de Groot, PE1HZG (amsat address works)

1575. Re: impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <89kaieptp1@uranium.btinternet.com>
Source record: 62980

You say you are measuring with a scope but what kind of impedance is that at the IF frequency?? and Is the local oscillator section working properly and producing the right drive??
Just a couple of thoughts
Cheers de Alan G3NYK
Paul Martin wrote in message <38BD4460.D2C63363@bright.net>...
>Am I correct in my analogy? I have a circuit succeeding an NE602 mixer

1576. Re: ctcss to make

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Geert Jan de Groot <nomailplease@spambait.org>
Message-ID: <UChv4.16446$nJ.269283@typhoon.chello.nl>
Source record: 62981

> Can any body please tell me how to make a ctcss encoder or give me the chip
> numbers to build one.

The easiest way is to look for 'communication specialists' modules;
HRO sells these. They are itty bitty modules, small enough to put
in nearly all equipment (I have an en/decoder that is the size of a
postage stamp).

As to chips, Consumer Microsystems Limited (CML, http://www.cmlmicro.co.uk/)
is about the only game in town. The easiest way was the FX365 , but that
is being phased out; the newer chips are much nicer but probably
need a microcontroller to drive them.
The bad news about CML is that their distribution mechanism is really bad:
because they mainly sell to specialized users, getting these chips
in small quantities is a real pain.

A third possibility is a square wave generator with a stiff low-pass
filter (such as an MF6 or thereabouts). Since square waves only have
odd harmonics, filtering is not hard.

A fourth possibility is using a twisted-ring counter with weighted
resistors to build a D/A converted that generates sine waves;
see page 667 of 'the art of electronics' (if you don't know the book,
purchase one!)

A fifth possibility is what I am currently experimenting with
for a repeater, using a one-bit output from an EPROM and average
the bit stream. Basically, I read out an EPROM at 250 KHz and
use a simple RC filter to average out the ones and zeroes
into a sine wave. The advantage is that it's all-digital
(no critical resistors, no ports), the frequency is crystal controlled,
and the distortion is _very_ low. I get the tones for ID etc for free
and use the EPROM to supply signals for a switched capacitor
filter for CTCSS decode.

73,

Geert Jan de Groot, PE1HZG

1577. Re: Help on PI network tuning algorithm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: Robert Fanfant <fanfant@ix.netcom.com>
Message-ID: <89k7ms$q35@news.dns.microsoft.com>
Source record: 62982
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

> What is the "source" for the RF?
HF radio, amateur bands.

>Will there be two "tuners" used, one in
> the transmitter and one in the feedline, perhaps at the antenna?
>
No, just this autotuner which will be mounted close to the antenna. My rig
does have an autotuner but it won't be used.

> In the really old days we would tune for max RF current in the line.
>

I get both a forward and reflected voltage out of the SWR detector. I assume
max current equals maximum forward voltage and a minimum reflected volatage.

> You start with the output "loading" capacitor fully meshed.
>
> You now adjust the input "tuning" capacitor for maximum line current.
>
> Increase the loading, by reducing the output "loading" capacitance in
> small increments, while simultaneously maintaining the maximum line
> current by adjusting the input "tuning" capacitor.
>
> At some point, further loading adjustments will not increase the line
> current. This indicates some combination of the maximum coupling range of
> the PI network and/or the maximum power output of the RF source.
>
Can you elaborate on when to make the inductor adjustments?

> Using proper components to build the PI network and selecting the optimum
> length of the feedline (determined by the actual antenna characteristics)
> you should be able to load almost anything from a beam to a flag pole.
>

Thats the plan.

> >I have a phase detector that tells me if the load is too inductive or
> >too capacitive. Also have an SWR detector that starts the auto tuning
> >process when it detects a high SWR.
>
> Taken out of context and by themselves there is no such thing as "too much
> reactance" nor is there "too high" a SWR.
>

The SWR forward and reflective voltages get converted into an SWR value. The
microprocessor makes the decision if the SWR is greater than 1.5:1 then its

time to re-tune.

1578. Microstrip Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-01 00:00:00 UTC
From: pejman <pejman_mNOpeSPAM@hotmail.com.invalid>
Message-ID: <25462065.3a7a3edf@usw-ex0109-070.remarq.com>
Source record: 62983

I want information about microstrip antenna design and
fabrication and information about phase microstrip antenna
array that used in mobile systems.
Thanks,Pejman

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

1579. Re: impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38BE5EAC.49FB9313@bright.net>
Source record: 62895

The output freq is 50 mhz and the probe is rated for 400 mhz and has no perceptable loading effect on the circuit. The osc is external at 260 mv p-p. The specs call for >200 mv.
Paul

Alan Melia wrote:

> You say you are measuring with a scope but what kind of impedance is that at
> the IF frequency?? and Is the local oscillator section working properly and
> producing the right drive??
> Just a couple of thoughts
> Cheers de Alan G3NYK
> Paul Martin wrote in message <38BD4460.D2C63363@bright.net>...
> >Am I correct in my analogy? I have a circuit succeeding an NE602 mixer

1580. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38bea535.260488183@news.erols.com>
Source record: 62896

Peter: Thanks for the very useful info on the filters. My homebrew 20 meter reciever uses a 3.579 MHz IF, but I've filed your message for use in future 455 kHz projects.

As for an NE-602 product detector in the Mighty Midget receiver (MMRX)... well, I really like the NE-602 and am using one in a 10 meter (outboard) downconverter with the MMRX, but I don't think I could get myself to put one in the there on the chassis amidst those 6U8s! I'm sure you know what I mean!

73 Bill N2CQR

On Thu, 02 Mar 2000 03:19:51 GMT, "NANCY GIANAKOPOULOS" <n.gianakopoulos@worldnet.att.net> wrote:

>A good Toko transformer to use at 455KHz IFs is the RMC502-182 transformer;
>this unit has a center-tapped primary, which makes it good for use with
>MC-1350 chips. Also, this transformer is great, when it is used with an
>NE-602 as a product detector.
> The Digi-Key part number is TK1305-ND; cost is about $1.75 in small
>quantities. If you do use this device as the tuned element in a product
>detector, a BB-509 varactor is a good bet. This diode has a range of 4 to
>33pF, with a tuning voltage of 30V to 4V. With a tune voltage of 8 volts, a
>10K linear pot, with a 24K resistor at the hot end, and a 24K resistor at
>the cold end of the pot to ground gives a plus or minus 3KHz tuning range of
>the BFO. On a final note, the ceramic filters that our Canadian friend is
>talking about are Murata CFU-455H, of CFWS-455H filters. These filters have
>a 6KHz bandwidth. The CFU series are 4 elements, while the CFWS series are
>6 elements. The bandwidth is specified by the letter code; the E and F
>bandwidths are for NBFM, the G bandwidth is 8KHz, the H bandwidth is 6KHz,
>the I bandwidth is 4KHz, and the K bandwidth is for SSB use. Look inside of
>your Icom, Kenwood, and Yaesu receivers, and you will see the CFWS-455H for
>AM wide, and the CFWS-455I for AM narrow.
> Thanks to everyone who takes the time to read this post!
>
>Pete Gianakopoulos
>Cedar Rapids, Iowa

1581. Fractal antenna for 2 metres?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Dave Bullock <daveb@ihr.mrc.ac.uk>
Message-ID: <38BE6EF5.B9BB9E22@ihr.mrc.ac.uk>
Source record: 62897

Anyone got any information on building a fractal beam, quad etc for 2
metres?
What are the basic rules? can they be directly scaled ie. from 10 metres
to 2 metres?
Have you a sure fire design or operation tips?
Apart from a load of bent wire what do I need?

Please help if you can....thanks ... Dave

--
* * * * * * * * * * * * * * * * * * * *
* Dave Bullock *
* MRC Institute of Hearing Research *
* Nottingham University *
* Nottingham *
* NG7 2RD *
* *
* daveb@ihr.mrc.ac.uk *
* * * * * * * * * * * * * * * * * * * *

1582. Help - Need Homebrew Keyer Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <89lv6i$je2$1@nnrp1.deja.com>
Source record: 62898

I'm trying to locate an article that appeared in CQ Magazine in the early to mid 90's. The article was about constructing an electronic keyer. The keyer had two PC board paddles. One paddle was for the dits and the other, when touched, formed a continuous dah. The length of the dah depended on how long the dah pad was touched. The keyer had a pcboard pad on the bottom where the hand rested. When the hand touched the pad on the keyer and the fingers touched one of the paddles the circuite was closed (the hand was part of the circuit at that point) and the keyer activated. I built two of these things and loved the way they worked. I gave them both away and now I'd like to build another but have lost the article.

Can anyone help with a copy of the article???

Thanks and 73!

Bill Harbour
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

1583. HV Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Tom Repstad <kb1cga@starc.org>
Message-ID: <38be8b1e@news.together.net>
Source record: 62899
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Have Peter W. Dahl plate transformer: Primary: 115/230 VAC
Secondary: 1250 VAC @ 1.5 Amp CCS (this produces 3100 VDC under load in a voltage doubler supply).

This is a serious transformer. Prefer local pickup in Burlington Vermont area, it weighs 46lbs.

This transformer is new and has never been used. $200 + shipping if not a pickup.

e-mail if interested.

--Tom
KB1CGA

1584. HV Caps & Power Resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Tom Repstad <kb1cga@starc.org>
Message-ID: <38be8d75@news.together.net>
Source record: 62900

Have 8 Mallory 1500MFD @ 450V Caps. These are really nice caps with screw terminals for connections and are not old. $64.00 for the lot.

2 each 8K @ 25W? 50W? resistors (not sure of wattage but they are big 25W at least) plus 1 IRC 1.5K 18W resistor. $15 for the set.

Prices do not include shipping.

E-mail if interested

--Tom
KB1CGA

1585. FS Or Trade: Icom 781 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: richcom@earthlink.net
Message-ID: <38bf9063.4140729@news.earthlink.net>
Source record: 62901

Icom 781 HF rig with built in tuner,built in scope,built in power
supply. 150Watts, Does full
power, I put it on a dummy load and it puts out 150 Watts. Comes
with Manual,Power Cord.
No original box and no mic comes with it. This rig works 100
percent
and the scope is nice and bright. The metal cabinet that goes around
it has a few touch ups on it.
The serial number is: 01779 As I stated, everything works
GREAT. Of course this would be double boxed
and packed well.

WAS: 2,675.00 NOW: 2,500.00 FIRM
Or trade for GM300 VHF and UHF Mobiles
of equal value or Spectra Mobiles VHF and UHF. Ham Gear,
Also looking for Collins Gear. Just let me know what you have.
Reply Email.
Thanks for reading,Rich.

1586. Re: Resending: Help on PI network tuning algorithm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Bart Rowlett <bart@wb6hqk.ampr.org>
Message-ID: <38BE90DD.309DBE8B@wb6hqk.ampr.org>
Source record: 62902
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.homebrew

Robert Fanfant wrote:
>
> I'm building a microprocessor based auto tuner and need help on
> the tuning algorithm.
>
> The tuner is a PI network (2 caps, 1 ind) with individual stepper motors for
> both caps and inductor. I have a phase detector that tells me if the load
> is too inductive or too capacitive. Also have an SWR detector that starts
> the auto tuning process when it detects a high SWR.
>
> Can anyone point me in the right direction to solve the tuning algorithm.
> For example if the phase detector tells me that the load is too capacitive,
> which cap should I rotate???

First of all, it should be noted that that the PI network doesn't have a unique tuning solution. You have three controllable tuning parameters and you only need two, assuming all three elements can be varied from zero to infinity. In the case of RF amplifier tank circuits, the additional degree of freedom is used to select the operating Q, (approx 10 usually) but your implementation is free to choose the third constraint based on other criteria more useful for the specific situation such as:

- Maximum bandwidth - probably not an issue for an autotuner unless you are dealing with very high bandwidth signals or unusually high Q antenna systems.

- Minimum loss - Probably nearly the same as maximum bandwidth.

- Avoidance of coil self resonances.

- Algorithm simplicity - This would be my choice. Details of course depend on the components used and the required matching range.

My recommendation is to forget worrying about the tuning algorithm for a while and spend some time determining the system requirements in terms of load impedance range (reactance and resistance), for each of the required operating frequency ranges. You will need to characterize the candidate tuning components over the relevant frequency ranges and estimate the controllability (step size, backlash etc.). You will also need to know in some detail what the 'phase' and 'SWR' detector are actually measuring and over what dynamic range they are useful.

Once you know your requirements and device characteristics you can mathematically determine if it is possible to meet your requirements.

Since this problem is essentially two dimensional, I strongly suggest graphing the solutions parametrically on a Smith chart. Other presentations are useful as well, but a thorough understanding of the Smith chart itself will almost certainly prove useful before you are done. Begin by plotting solution curves using a single inductor and capacitor in each (different colors are useful) of the possible four L network configurations. You will probably find you don't actually require the full flexibility of the PI network and may choose to use a single L and C and a couple of relays instead. If not,
consider an algorithm where either the input OR output C is set to minimum depending on gross magnitude of the transformation ratio. Note from a phase and SWR measurement alone you can not determine which case is appropriate.

Gotta go....

bart
wb6hqk

1587. Re: Fractal antenna for 2 metres?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8bt5io.mg9.X@animas.frontier.net>
Source record: 62903

On Thu, 02 Mar 2000 13:39:01 +0000, Dave Bullock wrote:
>Anyone got any information on building a fractal beam, quad etc for 2
>metres?

What!? Here, too?

1588. FS: 1000's of Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <89m5op$3jls$1@newssvr03-int.news.prodigy.com>
Source record: 62904
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap

email m.pasternack@prodigy.net for list. Murray, W6KRC

1589. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Richard Nielsen <rnielsen@uidaho.edu>
Message-ID: <89m9e0$747$1@kestrel.csrv.uidaho.edu>
Source record: 62905

Richard Nielsen <rnielsen@uidaho.edu> wrote:

> I'm in the middle of building an FET version of a regenerative
> receiver. (See http://www.mines.uidaho.edu/~keng/sch/ which includes the
> Lindsay and several other regenerative receivers.)

Well, my son and I finished assembling it last night and got it working. I found out that it works much better if you switch the antenna from the ground position over to the 40-m dipole (hi hi). We got a strong signal from the BBC. I assume it's the one closest to 40 m since we're using the coils for the 40 m band.

I'm still going to have my Elmer look at it and help me figure out just what frequencies it can listen to. But it pretty much worked on the first try (see the antenna comment, above) so we're pretty excited.

--

Richard Nielsen, N7UI

1590. Re: Need Help w/mike ckt for Icom 735

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: merryprankster <merryprankster@cwcom.net>
Message-ID: <p0yv4.27598$V_.13825@news1-hme0>
Source record: 62906
Cross-posted to: alt.ham-radio.marketplace,rec.boats.electronics,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi Bob here,
You can probably get a adapter plug from a radio shop,
that will let you plug in the mike of your choice,
if you don't want to mess with wires.

If ICOM are all the same wiring ?
I have a mate with an 706 and I can get a look
at his book for you if you haven't sorted it by now.
Best of luck

1591. 6.0V @ 15A Filament Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Tom Repstad <kb1cga@starc.org>
Message-ID: <38bec857@news.together.net>
Source record: 62907
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Have military 6.0V CT @ 15A filament transformer, 115/120/125V Inputs.
$20.00 + Shipping.

E-Mail if interested.

--Tom
KB1CGA

1592. Re: ts-940 Shuts it self OFF!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Ron <w8ron@stratos.net>
Message-ID: <38BED9F5.BDF0EADA@stratos.net>
Source record: 62908

Hi Roger

If I am not mistaken , There is a timer on this rig ....you may have inadverntaly set it.

Ron

Roger Rives wrote:

> Hello I have a TS-940 that cuts its self off. You have to open the unit and
> reset the micro to get it to come back on. It seems to happen while adjusting
> knobs on the front pannel like the rit. please email any sugestions to
> kb5yxu@cs.com

1593. Re: Repeater controller circuit???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <toBv4.16858$e53.603319@news20.bellglobal.com>
Source record: 62909

I have been looking into using my pc to control the repeater as well. I have only found one link for such a project. It is RLM I think. Can you point me to some other sites. I know there must be lots of links out there for these types of circuits but I just must be looking in the wrong places. This is my first repeater so I am in the learning stages. Thank you for your help. 73's

VO1BIL
Bill

"Skipp" <skipp@pilot.ucdavis.edu> wrote in message news:89kh2oikc2@mark.ucdavis.edu...
> : Bill and Tracy <tmbc@nf.sympatico.ca> wrote:
> : Can any tell me where I can find a homebrewed repeater controller. I don't
> : need anything too fancy. I would just like it to have a courtesy tone, and
> : an automatic link timer shut off. Thanks in advance.
> : Bill
>
> Hi Bill,
>
> Everything has gone computer now, not much in the old type original
> cor/cos timer circuits are around in kit form. The ARRL Handbook would be
> a great place to start. Another place is Hamtronics... See if you can dig
> up one of their old COR 2, 3 or 4 circuits. It's just what your looking
> for.
>
> cheers
> skipp@pilot.ucdavis.edu
>

1594. Re: Electronic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38BEE346.6DD1@ixpres.com>
Source record: 62910

robert leavitt wrote:
>
> I should just say I am looking for an electronic keyer, no need for it to be
> iambic.
>
> > I am looking for instructions for building a non PIC electronic iambic
> > keyer.
>
> Drew
> KB1DHB/AA
>
Drew OM,
Why do you NOT want PIC-based? I've been using an SMT "TICK" (it is
actually an SMT SO8 packaged PIC processor) keyer chip sold by Embedded
Research for a couple of years now for mobile. It is a nice little
chip, and runs for a year on a 3V disc battery. I glued mine to the
bottom of my bencher paddle. Makes a very compact self-contained keyer,
and is programmable from the key too.

73 and GL,
Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

1595. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: DETROIT47 <detroit47@mediaone.net>
Message-ID: <38BEEDF9.48A87C31@mediaone.net>
Source record: 62911

Their is a nice design in the west coast handbook I have used it before.
73 N8QPC

will wrote:

> newbies should not mess with grids that have 1 watt or 0 watts dissipation!
>
> Skipp <skipp@pilot.ucdavis.edu> wrote in message
> news:89khfaikc3@mark.ucdavis.edu...
> > : Tom Repstad <kb1cga@starc.org> wrote:
> > : Hi Gang,
> > : I'd like to build a linear using a 4CX1500b (have tube, socket, plate
> xfrmr,
> > : etc)... What I'm looking for is HELP! Schematics for a solid design
> using
> > : this tube. And any other info that might be helpful. This is my first
> linear
> > : project and I'd like it to not blow up when I plug it in :)
> >
> > You can find a 4cx1000 amplifier or two on my http://sonic.ucdavis.edu
> > pages. It's the same basic tube as your 1500b.
> >
> > [snip]
> > :I would use a G3SEK tetrode board, this board will give your tetrode good
> > :protection. It is available in the USA. It has screen and grid regulators
> > :plus numerous protection measures. A good product overall, although there
> > :is some messing about when you want to use different screen voltages,
> > :pity they did not specify all the component values for all the popular
> > :tubes. My only criticism for this board which is sold as a complete
> > :sollution.
> >
> > The board is a nice way for a newbie builder to properly set up a tetrode
> > with less mistakes, but it's not the only thing out there. Older ARRL
> > Handbooks are also very helpful.
> > You should be into building it yourself to learn something. Half the
> > battle is the homework.
> >
> > cheers
> > skipp
> >
> > ps the tube will really put out a nice signal in SSB AB1 operation.
> >

1596. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38BF17FE.833FA7A@agilent.com>
Source record: 62912
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:
>
> In article <38B58F6E.85777809@agilent.com>,
> Tom Bruhns <tom_bruhns@agilent.com> wrote:
> > Science Hobbyist (William Beaty) wrote:
> >
> > > The same thing occurs with conventional radio waves and
> > > electrically small dipole antennas if a large AC voltage is
> > > impressed upon the antenna. The same thing occurs with small
> > > loop antennas if they are given a large current. Actively
> > > resonating antennas draw in far more energy than passive
> > > pickup coils.
> >
> > Are you suggesting that such antennas are not linear systems?
>
> Not at all.

...

Linearity, to me, means that the response of a system (the antenna) to one input (signal) is independent of its response to any other signals. That immediately tells me that the response to some signal we wish to receive will not be changed by some other field around, or current in, or voltage across the feedpoint of, our antenna.

Do I get to pick? If I do, I'll opt for linearity.

Cheers,
Tom

1597. RE: AA4GM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: James Hayes <hazy119@wetelcom.com>
Message-ID: <38bf2b3e@news.westelcom.com>
Source record: 62913
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello,
I would like to have info regarding any dealings that my fellow amateurs may have had regarding Ted Seely, AA4GM as I had some bad dealings with him regarding a deal on Yahoo Auctions for a pair of Heathkit twins. I won them fair and square, but apparently once he found that I am JUST a No-Code Tech class amateur (he being Amateur Extra) decided to not answer my emails in reply to his emails to confirm the winning bid.
My query resides in the above dealings in that I wish to know if this Amateur is renowned for this type of dealing with other subordinate hams. I thought this was a fraternity of learning and mentoring of younger hams by Elmer's who would encourage, but I think that this man overlooks the elmering he once had and the gleam in a budding amateurs eyes at the glowing of vacuum tubes that reminded him of the day when he himself was 13 and an uncle gave him his Heathkit twins to remember him by and possibly become an amateur and subsequently passing this to his children or family members some fine day in his old age. Please if you have ANY such info please contact me that I may warn some of my young amateur friends to STAY AWAY from this man.
I'll step down from my soap box now a bit more educated and CAUTIOUS of my fellow hams as I have been bitten.

--
Jim Hayes, N2YEV
hazy119@westelcom.com

1598. Re: ctcss to make

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Skipp <skipp@pilot.ucdavis.edu>
Message-ID: <89kgtpikc1@mark.ucdavis.edu>
Source record: 62984

: A320 Systems <sleesa@powerup.com.au> wrote:
: Can any body please tell me how to make a ctcss encoder or give me the chip
: numbers to build one.
: Stewart

Hi Stewart,

A sub tone encoder is pretty easy to make. The best chip for doing an inexpensive single frequency encoder is a 555 timer chip. It has more than enough power to drive a three section low pass filter in the astable mode.

I've been using it for years in one radio. If you email me direct, i'll see if I can dig up the diagram for you. You could even put a knob on the frequency adjustment pot and make it variable if you like.

cheers
skipp

1599. Re: Repeater controller circuit???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Skipp <skipp@pilot.ucdavis.edu>
Message-ID: <89kh2oikc2@mark.ucdavis.edu>
Source record: 62985

: Bill and Tracy <tmbc@nf.sympatico.ca> wrote:
: Can any tell me where I can find a homebrewed repeater controller. I don't
: need anything too fancy. I would just like it to have a courtesy tone, and
: an automatic link timer shut off. Thanks in advance.
: Bill

Hi Bill,

Everything has gone computer now, not much in the old type original cor/cos timer circuits are around in kit form. The ARRL Handbook would be a great place to start. Another place is Hamtronics... See if you can dig up one of their old COR 2, 3 or 4 circuits. It's just what your looking for.

cheers
skipp@pilot.ucdavis.edu

1600. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Skipp <skipp@pilot.ucdavis.edu>
Message-ID: <89khfaikc3@mark.ucdavis.edu>
Source record: 62986

: Tom Repstad <kb1cga@starc.org> wrote:
: Hi Gang,
: I'd like to build a linear using a 4CX1500b (have tube, socket, plate xfrmr,
: etc)... What I'm looking for is HELP! Schematics for a solid design using
: this tube. And any other info that might be helpful. This is my first linear
: project and I'd like it to not blow up when I plug it in :)

You can find a 4cx1000 amplifier or two on my http://sonic.ucdavis.edu
pages. It's the same basic tube as your 1500b.

[snip]
:I would use a G3SEK tetrode board, this board will give your tetrode good
:protection. It is available in the USA. It has screen and grid regulators
:plus numerous protection measures. A good product overall, although there
:is some messing about when you want to use different screen voltages,
:pity they did not specify all the component values for all the popular
:tubes. My only criticism for this board which is sold as a complete
:sollution.

The board is a nice way for a newbie builder to properly set up a tetrode
with less mistakes, but it's not the only thing out there. Older ARRL
Handbooks are also very helpful.
You should be into building it yourself to learn something. Half the
battle is the homework.

cheers
skipp

ps the tube will really put out a nice signal in SSB AB1 operation.

1601. Re: NE602 oszillator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <GRkv4.4491$NO6.356755@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62987

The input capacitance of the 602 is approximately 3pF. I use this chip in
some of my own designs,

Pete Gianakopoulos

<albirdie@my-deja.com> wrote in message news:89isqgdck1@nnrp1.deja.com...
> In article <dSZJFVAUfCv4EwiR@g0wbf.freeserve.co.uk>,
> Barry McCarthy <barry@g0wbf.freeserve.co.uk> wrote:
> > In article <89grjnvad1@nnrp1.deja.com>, albirdie@my-deja.com writes
> > >HI,
> > >
> > >I want to build up a HF mixer with the NE602.
> > >For the oszillator Philips shows a Colpitts oszillator.
> > > C2
> > > ________||_____________
> > > (_|_ || _|_ 6
> > > L(___C1 ___C3 To Pin of the NE602
> > > (| |________ 7
> > > | | _|_
> > > | | ___C4
> > > |____|_________|
> > >
> > >With the values of: L=1.5uH ; C1=7pF ; C2=100nF (!) ; C3=47pF ;
> C4=47pF
> > >a oszillator frequency of ~20 MHz occurs. (proofed)
> > >How do I calculate this ?
> > >Thanks for your help!
> >
> > 25330/L(uH)*C1(Pf)pF = Fsquared
> > --
> > Barry McCarthy
> > G0WBF
> >
>
> You mean: f = 1 7 (2*Pi*sqrt(L*C1))
>
> I thought so too, but C3, C4 and the (unknown) input capacitance
> of the NE602 is involved too.
>
> -Hannes
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1602. Re: Simple broadening of CW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <r5lv4.4527$NO6.355400@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62988

A good Toko transformer to use at 455KHz IFs is the RMC502-182 transformer; this unit has a center-tapped primary, which makes it good for use with MC-1350 chips. Also, this transformer is great, when it is used with an NE-602 as a product detector.
The Digi-Key part number is TK1305-ND; cost is about $1.75 in small quantities. If you do use this device as the tuned element in a product detector, a BB-509 varactor is a good bet. This diode has a range of 4 to 33pF, with a tuning voltage of 30V to 4V. With a tune voltage of 8 volts, a 10K linear pot, with a 24K resistor at the hot end, and a 24K resistor at the cold end of the pot to ground gives a plus or minus 3KHz tuning range of the BFO. On a final note, the ceramic filters that our Canadian friend is talking about are Murata CFU-455H, of CFWS-455H filters. These filters have a 6KHz bandwidth. The CFU series are 4 elements, while the CFWS series are 6 elements. The bandwidth is specified by the letter code; the E and F bandwidths are for NBFM, the G bandwidth is 8KHz, the H bandwidth is 6KHz, the I bandwidth is 4KHz, and the K bandwidth is for SSB use. Look inside of your Icom, Kenwood, and Yaesu receivers, and you will see the CFWS-455H for AM wide, and the CFWS-455I for AM narrow.
Thanks to everyone who takes the time to read this post!

Pete Gianakopoulos
Cedar Rapids, Iowa

Michael Black <blackm00@cam.org> wrote in message
news:blackm00-2802001545470001@dialup-1098.hip.cam.org...
> In article <38ba93bb.153543771@news.erols.com>, n2cqr@erols.com (Bill
> Meara) wrote:
>
> >[stuff deleted]
> > BTW: I was thinking a bit more about our comparison between my RX in
> > "wide" mode and a DC receiver with a converter. I think my RX is
> > really a step or two beyond the converter- DC equivalent. First, we
> > have the IF amp. This of course allows a better gain distribution and
> > avoids the heavy dependence on AF amplification that you have in DC
> > receivers. Then there is the product detector and BFO.
> >
> What I was really getting at was that you wouldn't have much selectivity,
> and definitely not single signal selectivity, once you bypassed the
crystal
> filter. In other aspects, it probably is better than a straight
> direct conversion receiver, as you point out.
>
> Like the direct conversion receiver, your selectivity with the crystal
> filter removed comes from the audio response, and the audio image is still
> there.

>
> Single signal selectivity didn't arrive on the scene until some years
> after the superhet. I gather a major reason for Armstrong designing
> the superhet was to move the signal down to a lower frequency where it
> was easier to get gain back in those days, and putting most of the gain
> at a fixed frequency simplified things a lot. Sharp selectivity came
> later.
>
> But that was so long ago, and we are so used to having narrow selectivity
> in the IF of a superhet, that saying "a direct conversion receiver with
> a converter" seemed like a way of describing things in a fashion that
> more could visualize.
>
> There have been receivers described, and I thought Ten Tec even once
> sold a rig, which could be described as a direct conversion with a
converter,
> or alternately a superhet with no IF selectivity. It just depends on
> how you look at it.
>
> And of course, there have also been receivers that try to meld both,
> where they have a sharp filter in the IF, but very little IF gain.
> They make it up in the audio chain, just like in the direct conversion
> receiver.
>
> > I've been less than thrilled with the DC receivers that I've used
> > (with the exception of the HW-8's rx!) but I really like my superhet
> > in the broadband mode. This morning I've been listening to the
> > W9NS/mm working VKs. Some sort of DX expedition en reoute to exotic
> > climes.
> >
> > Receiver madness continues here. I was at a hamfest yesterday and
> > bought a couple of junky old AM/FM broadcast receivers with "extra"
> > (police, air, wx) bands. Couldn't resist. At the very least they
> > will serve as a source of Toko coils and transformers. Also got a
> > little TenTec SW regen.
> >
> Keep an eye out for CB sets. They have narrower 455KHz ceramic filters
> in them than AM broadcast receivers, and so they might be of use to
> you.
>
> Michael VE2BVW

1603. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <Y8lv4.4535$NO6.359460@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62989

To any interested parties, give me a shout if you need a schematic for a product detector that is based on an NE-602. I have a proven design that I have been using in my own receivers for the past several years.

Pete Gianakopoulos
Cedar Rapids, Iowa

Michael Black <blackm00@cam.org> wrote in message news:blackm00-2802001530070001@dialup-1098.hip.cam.org...
> In article <38ba91c5.153041756@news.erols.com>, n2cqr@erols.com (Bill
> Meara) wrote:
>
> > On Sun, 27 Feb 2000 23:30:21 -0500, blackm00@cam.org (Michael Black)
> > wrote:
> >[stuff deleted]
>
> > >If you read the text of the Mighty Midget, they tell you to reduce
> > >the RF gain when tuning SSB. This was necessary so the BFO was strong
> > >enough in reference to the incoming signal. If the ratio of
> > >the two signals was wrong, the recovered SSB signal would be
> > >distorted or completely unintelligeble.
> >
> > Michael: I've had to reduce RF gain very often when the SSB signals
> > are strong. At one point I experimented with a more explicit
> > capacitive coupling between the BFO and the IF amp, but for some
> > reason it didin't work out and I went back to Lew's original scheme.
> >
> >
> > 73 Bill N2CQR
>
> Back in 1971 when I was 11, I bought a shortwave receiver. It
> was a Hallicrafters S-120A, pretty expensive for me, but just
> about the cheapest there was at the time. I've said it in other
newsgroups,
> but it was the world's worst shortwave receiver.
>
> It was lousy for a lot of reasons, but one thing it definitely couldn't
> do was receive SSB, even though it had a BFO. I can't remember whether
> I figured out the problem myself, or read something and realized that
> was the problem. I do recall having the impression that the SSB signals
> were too strong. Whatever happened, I took a potentiometer I'd taken
> out of some junk piece of equipment, and used it as an attenuator at
> the antenna terminal. Suddenly, the receiver did work with SSB. However,
> by the time I'd attneuated the signals enough for the
> BFO to work, there were only a handful of signals that made it into

> the receiver.
>
> The BFO was just not strong enough to properly beat with the incoming
> signal in the envelope detector. Attenuating the signal made the
> BFO strong enough.
>
> This was the scheme that was in all the books up until AM receivers
> started fading away, under the topic of "tuning an SSB signal". Turn off
> the AGC, turn up the audio gain, reduce the RF gain. Up until SSB
> became common, receivers never had product detectors, and there was no
> problem with CW.
>
> As a matter of fact, I was lucky because I went from that S120A to a
> Hammarlund SP-600, and it didn't have a product detector either, so I
> had to tune things the same way. But the Super Pro was a great receiver,
> so it all worked fine.
>
> To fix the problem, one has to go to a product detector. And as already
> pointed out, that might be a problem in this case because the BFO signal
> gets coupled into the IF amplifier.
>
> Michael VE2BVW

1604. (no subject)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Aganaster@aol.COM
Message-ID: <dd.1e9ed39.25ef3bbf@aol.com>
Source record: 62990

Subject: SIX BUCKS
Date: 2/24/00 10:59 AM Pacific Standard Time
From: SSRCompany
Message-id: <20000224135910.08524.00000761@ng-cm1.aol.com>

Subject: Six Dollar's
Date: 2/24/00 11:15 AM Eastern Standard Time
From: SSRCOMPANY
Message-id: <20000224111519.26555.00001455@ng-ba1.aol.com>

How to turn $6 into $50,000!-Or more!!-It 100% works!!!
READING THIS COULD CHANGE YOUR LIFE:

This really does work if you give it a honest try!

I found this on a bulletin board and decided to try it. A little while back, I was browsing through newsgroups, and came across an article similar to this that said you could make thousands of dollars within weeks with only an initial investment of $6.00! So I though, "Yeah right, this must be a scam", but like most of us, I was curious, so I kept reading.
Anyway, it said that you send $1.00 to each of the 6 names and address stated in the article. You then place your own name and address in the bottom of the list at #6, and post the article in at least 200 newsgroups. (There are thousands) No catch, that was it. So after thinking it over, and talking to a few people first, I thought about trying it. I figured: "what have I got to lose except 6 stamps and $6.00, right?" Then I invested the measly $6.00.
Well, GUESS WHAT!!... Within 7 days, I started getting money in the mail! I was
Shocked ! I figured it would end soon, but the money just kept coming in. In my first
week , I made about $25.00. By the end of the second week I had made a total of over
$1,000.00! In the third week I had over $10,000.00 and it's still growing. This is now
my fourth week and I have made a total of just over $42,000.00 and it's still coming in
rapidly.
It's certainly worth $6.00, and 6 stamps, I have spent more than that on the lottery!! Let me tell you how this works and most importantly, why it works Also, make sure you print a copy of this article NOW, so you can get the information off of it as you need it.

I promise you that if you follow the directions exactly, that you will start making more money than you thought possible by doing something so easy!

Suggestion: Read this entire message carefully! (print it out or download it). Follow the simple directions and watch the money come in! It's easy. It's legal. And, your investment is only $6.00 (Plus postage)

IMPORTANT: This is not a rip-off; it is not indecent; it is not illegal; and it is virtually no risk - it really works!!!! If all of the following instructions are adhered to, you will receive extraordinary dividends.

PLEASE NOTE:
Please follow these directions EXACTLY, and $50,000 or more can be yours in 20 to 60 days. This program remains successful because of the honesty and integrity of the participants. Please continue its success by carefully adhering to the instructions. You will now become part of the Mail Order business. In this business your product is not solid and tangible, it's a service. You are in the business of developing Mailing Lists. Many large corporations are happy to pay big bucks for quality lists. However, the money made from the mailing lists is secondary to the income which is made from people like you and me asking to be included in that list.
Here are the 3 easy steps to success:
STEP 1: Get 6 separate pieces of paper and write the following on each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." "Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelope (to prevent thievery).
Next, place one paper in each of the 6 envelopes and seal them, MAKE SURE THAT THERE ARE ENOUGH STAMPS ON YOUR ENVELOPES. You should now have 6 sealed envelops, each with a piece of paper stating the above phrase, your name and address, and a $1.00 bill.
What you are doing is creating a service. THIS IS ABSOLUTELY LEGAL!
You are requesting a legitimate service and you are paying for it! Like most of us I was a little skeptical and a little worried about the legal aspects of it all. So I checked it out with the U.S. Post Office (1-800-725-2161) and they confirmed that it is indeed legal!

Mail the 6 envelopes to the following addresses:

#1) William Rosser - 254 Getzville Rd. Amherst, NY 14226
#2) Rae Patterson - 150 Hauli St. #150 Wailuku, HI 96793
#3)Connie Wrenn - 111 Chesterfield Dr. Elizabeth City, NC 27909
#4)Christopher Petersen - 222 Haulani St. Pukalani, HI 96768
#5) GERALD R. DE CROCE- 2 HERITAGE CT. MORRIS PLAINS,NJ 07950
#6) Alex Beltran - 6650 Hogan Dr., Sacramento, CA 95822

STEP 2: Now take the #1 name off the list that you see above, move the other names up (6 becomes 5, 5 becomes 4, etc.) and add YOUR Name as number 6 on the list.
STEP 3: Change anything you need to, but try to keep this article as close to original as possible. Now, post your amended article to at least 200 newsgroups or emails, (I think there are close to 50,000 groups) All you

need is 200, but remember, the more you post, the more money you make!
**EVERYBODY AROUND THE WORLD CAN DO IT, BUT REMEMBER TO PUT
ENOUGH STAMPS ON YOUR ENVELOPES!!!!!**

This is perfectly legal! If you have any doubts, refer to Title 18 sec.
1302 -&- 1341 of
the Postal lottery laws. Keep a copy of these steps for yourself and,
whenever you
need money, you can use it again, and again.

PLEASE REMEMBER that this program remains successful because of the
honesty and integrity of the participants and by their carefully adhering to
the directions. Look at it this way. If you are of integrity, the program
will continue and the money that so many others have received will come your
way.
NOTE: You may want to retain very name and address sent to you, either
on a
computer or hard copy and keep the notes people send you. This VERIFIES that
you
are truly providing a service. (Also, it might be a good idea to wrap the $1
bill in dark
paper to reduce the risk of mail theft.) So, as each post is downloaded and
the
directions carefully followed, six members will be reimbursed for their
participation as a
List Developer with one dollar each.
Your name will move up the list geometrically so that when your name
reaches
the #1 position you will be receiving thousands of dollar is CASH!!! What an
opportunity for only $6.00 ($1.00 for each of the first six people listed
above). Send it
now, add your own name to the list and you're in business!

--------DIRECTIONS--------FOR HOW TO POST TO NEWSGROUPS--------------
Step 1) You do not need to retype this entire letter to do your own
posting. Simply put your cursor at the beginning of this letter and drag
your cursor to the bottom of this document, and select 'copy' from the edit
menu. This will copy the entire letter into the computer's memory.
Step 2) Open a blank 'notepad' file and place your cursor at the top
of the blank page. From the 'edit' menu select 'paste.' This will paste a
copy of the letter into notepad so that you can add your name to the list.
Step 3) Save your new notepad file as a .txt file. If you want to do
your postings in different settings, you'll always have this file to go back
to.
Step 4) Use Netscape or Internet explorer and try searching for
various newsgroups (online forums, message boards, chat sites, discussions).
Step 5) Visit these message boards and post this article as a new
message by
highlighting the text of this letter and selecting paste from the edit menu.
Fill in the
Subject, this will be the header that everyone sees as they scroll through

the list of
postings in a particular group, click the post message button. You're done with your
first one!
Congratulations THAT'S IT! All you have to do is jump to different newsgroups and post away, after you get the hang of it, it will take about 30 seconds for each newsgroup!

**REMEMBER, THE MORE NEWSGROUPS YOU POST IN, THE MORE MONEY YOU WILL MAKE!!

BUT YOU HAVE TO POST A MINIMUM OF 200**
That's it! You will begin receiving money from around the world within days! You may
eventually want to rent a P.O. Box due to the large amounts of mail you will receive.

----------Now the WHY part----------
Out of 200 postings, say I receive only 5 replies (a very low example).
So then I made $5.00 with my name at #6 on the letter. Now, each of the 5 persons who just sent me $1.00 make the MINIMUM 200 postings, each with my name at #5 and only 5 persons respond to each of the original 5, that is another $25.00 for me, now those 25 each make 200 MINIMUM posts with my name at #4 and only 5 replies each, I will bring in an additional $125.00!
Now, those 125 persons turn around and post the MINIMUM 200 with my name at #3 and only receive 5 replies each, I will make an additional $625.00!
OK, now here is the fun part, each of those 625 persons post a MINIMUM 200 letters with my name at #2 and they each only receive 5 replies, that just made me $3,125.00!!!! Those 3,125 persons will all deliver this message to 200 newsgroups with my name at #1 and if still 5 persons per 200 newsgroups react I will receive $15,625.00! With an original investment of only $6.00!
AMAZING!
When your name is no longer on the list, you just take the latest posting in the newsgroups, and send out another $6.00 to names on the list, putting your name at number 6 again. And start posting again. The thing to remember is: do you realize that thousands of people all over the world are joining the Internet and reading these articles everyday? JUST LIKE YOU are now!!

So, can you afford $6.00 and see if it really works?? I think so

Remember, play FAIRLY and HONESTLY and this will really work.
GOOD LUCK!!!!!!!!!!!

"Hard work beats talent, when talent doesn't work hard"

1605. anemometer kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Dennis Edey <vk4sx@dingoblue.net.au>
Message-ID: <89l57a$6lb$1@news1.mpx.com.au>
Source record: 62991

Hello any ideas where you can pick up these wind speed and direction kits ??
Kind Regards Dennis VK4SX.

1606. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <Wo+qPCA5$hv4EwR4@ifwtech.demon.co.uk>
Source record: 62992

Skipp wrote:

>:I would use a G3SEK tetrode board, this board will give your tetrode good
>:protection. It is available in the USA. It has screen and grid regulators
>:plus numerous protection measures. A good product overall, although there
>:is some messing about when you want to use different screen voltages,
>:pity they did not specify all the component values for all the popular
>:tubes. My only criticism for this board which is sold as a complete
>:sollution.
>
>The board is a nice way for a newbie builder to properly set up a tetrode
>with less mistakes, but it's not the only thing out there. Older ARRL
>Handbooks are also very helpful.
>You should be into building it yourself to learn something. Half the
>battle is the homework.
>

...and here we have the supplier's dilemma: one customer wants all the details worked out for him, while someone else wants a challenge!

I've tried to meet both needs.

On the one hand, I supply every set of boards with a comprehensive manual that step-by-step commissioning instructions. There cannot be a single set of component values that fits all tubes, so I give guidelines for changing the voltage and current ranges. There's also a more extensive Application Note on the web site. If anyone needs more specific help, I'm only an e-mail away.

On the other hand, my web site contains a downloadable article that explains all the background - and shows why you should *avoid* some screen supply ideas from older ARRL Handbooks! The article also gives schematics that many people have used successfully without needing the ready-made boards.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

1607. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <1rpv4.37649$3b6.173062@ozemail.com.au>
Source record: 62993

newbies should not mess with grids that have 1 watt or 0 watts dissipation!

Skipp <skipp@pilot.ucdavis.edu> wrote in message
news:89khfaikc3@mark.ucdavis.edu...
> : Tom Repstad <kb1cga@starc.org> wrote:
> : Hi Gang,
> : I'd like to build a linear using a 4CX1500b (have tube, socket, plate
xfrmr,
> : etc)... What I'm looking for is HELP! Schematics for a solid design
using
> : this tube. And any other info that might be helpful. This is my first
linear
> : project and I'd like it to not blow up when I plug it in :)
>
> You can find a 4cx1000 amplifier or two on my http://sonic.ucdavis.edu
> pages. It's the same basic tube as your 1500b.
>
> [snip]
> :I would use a G3SEK tetrode board, this board will give your tetrode good
> :protection. It is available in the USA. It has screen and grid regulators
> :plus numerous protection measures. A good product overall, although there
> :is some messing about when you want to use different screen voltages,
> :pity they did not specify all the component values for all the popular
> :tubes. My only criticism for this board which is sold as a complete
> :sollution.
>
> The board is a nice way for a newbie builder to properly set up a tetrode
> with less mistakes, but it's not the only thing out there. Older ARRL
> Handbooks are also very helpful.
> You should be into building it yourself to learn something. Half the
> battle is the homework.
>
> cheers
> skipp
>
> ps the tube will really put out a nice signal in SSB AB1 operation.
>

1608. Re: RF problems with keyboard and speakers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-02 00:00:00 UTC
From: Bill Turner <w7ti@jps.net>
Message-ID: <38be279f_1@news.jps.net>
Source record: 62994

Fred <fdecker@compuserve.com> wrote in message
news:89f3slhim1@ssauraab-i-1.production.compuserve.com...
> My HF rig is basically incompatible with my keyboard and subwoofer
speakers.
> Pretty much across the entire HF spectrum, I have various amounts of
> interference with both devices. My keyboard just stops working, all
lights
> and keys become disabled, and my speakers "burp" loudly on voice peaks. I
> tried puting thick ferrite chokes on both ends of the keyboad to no avail
> and haven't done any bypass or anything to it or the speakers yet. I was
> hoping others had been this way before with millions of these things out
> there and could say, yeah, put a .1uf cap here and a toroid there and it
> will work just fine. I am only using 50-100 watts, but it still overloads
> my computer accessories. Thanks.
>
>
> --
> Fred
> N4IXL
> ICQ:10254840
> http://members.aol.com/fdecker

I had the same problem and here's what worked for me:

1. If possible, get a keyboard made by Maxi-Switch. I have used two
different models, one standard and one programmable, and they were both
totally rf-proof, even at the 1500 watt level, whereas other makes of
keyboards were trashed by as little as 50 watts of rf.
2. Before I did #1 above, I was using a 40-meter inverted vee fed directly
with coax (no balun). Installing a choke-type balun at the feedpoint of the
vee reduced rfi greatly.
3. Get the ARRL book on rfi. Lots of good ideas there.

Bill, W7TI

1609. Re: Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-EC90FF.23373703032000@news.erols.com>
Source record: 62845
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

What class of service, AB1, AB2 or C?

In article <38c05b7c.90091746@news.online.no>, LA8AK@Online.NO wrote:

> wonder what is acceptable limit of grid current in a 2x 6146B
> amplifier?
> ALC voltage is often derived from varying grid current over bias
> network resistors, usually around 10k resistance. 1mA grid current
> will develop 10V voltage drop.
>
> Coupled via a 0.002uF capacitor to a voltage doubling rectifier with
> output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
> A feasable voltage, the ALC circuit may not have any real function at
> all
> I modified the FL-dx-500 and received very good reports for improving
> readability, but it still seems that few mA grid current is within
> acceptable limit of grid current for this sort of amplifier using 2x
> 6JS6A or 6146B
>
> 73 jan-martin
> LA8AK

1610. Cherche module Pll Fm broadcast

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Carreyn Thierry <carreyn.thierry@skynet.be>
Message-ID: <89mhd4qmk1@news1.skynet.be>
Source record: 62914

Je cherche modules Pll Fm broadcast 88-108Mhz watts
+ amplificateur large bande 88-108 Mhz in 5 W out 100w
avez vous qq chose me porposer???
+codeur st r ophonique.
carreyn.thierry@skynet.be

1611. Homebrew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <JgEv4.2889$F06.49301@typhoon.ne.mediaone.net>
Source record: 62915

I am looking for instructions for building homebrew single lever or iambic paddles.

You can reply to the group or e-mail me at kb1dhb@qsl.net.

Thanks

Drew Leavitt
KB1DHB/AA
kb1dhb@qsl.net

1612. Re: impedance w/scope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <n%Ev4.788$xZ.76350@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62916

Hi Paul,
Just in case Alan doesn't get back to you,
if you have a X10 scope probe with 15pf of capacitance
that is equal to 213 ohms of impedance at 50 Mhz. That
will load your circuit.

--
Mike Knowlton
Panama City Fl.
Paul Martin <pmartin@bright.net> wrote in message
news:38BE5EAC.49FB9313@bright.net...
> The output freq is 50 mhz and the probe is rated for 400 mhz and has no
> perceptable loading effect on the circuit. The osc is external at 260 mv
p-p.
> The specs call for >200 mv.
> Paul
>
> Alan Melia wrote:
>
> > You say you are measuring with a scope but what kind of impedance is
that at
> > the IF frequency?? and Is the local oscillator section working properly
and
> > producing the right drive??
> > Just a couple of thoughts
> > Cheers de Alan G3NYK
> > Paul Martin wrote in message <38BD4460.D2C63363@bright.net>...
> > >Am I correct in my analogy? I have a circuit succeeding an NE602 mixer
>

1613. WTB: The Gunnplexer Cookbook

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: William Blair <wbblair@att.net>
Message-ID: <t09ubscb96ibf7l9sogluk4h7nlu36v3d2@4ax.com>
Source record: 62917

If anyone has a copy of "The Gunnplexer Cookbook" that they don't
want, I'd like to buy it. Please email any offers.

Thanks,
Bill Blair
KD7HXZ

1614. Re: 4CX1500B Linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <kGGv4.38304$3b6.175352@ozemail.com.au>
Source record: 62918

who publishers the west coast handbook?

DETROIT47 <detroit47@mediaone.net> wrote in message
news:38BEEDF9.48A87C31@mediaone.net...
> Their is a nice design in the west coast handbook I have used it before.
> 73 N8QPC
>
> will wrote:
>
> > newbies should not mess with grids that have 1 watt or 0 watts
dissipation!
> >
> > Skipp <skipp@pilot.ucdavis.edu> wrote in message
> > news:89khfaikc3@mark.ucdavis.edu...
> > > : Tom Repstad <kb1cga@starc.org> wrote:
> > > : Hi Gang,
> > > : I'd like to build a linear using a 4CX1500b (have tube, socket,
plate
> > xfrmr,
> > > : etc)... What I'm looking for is HELP! Schematics for a solid design
> > using
> > > : this tube. And any other info that might be helpful. This is my
first
> > linear
> > > : project and I'd like it to not blow up when I plug it in :)
> > >
> > > You can find a 4cx1000 amplifier or two on my http://sonic.ucdavis.edu
> > > pages. It's the same basic tube as your 1500b.
> > >
> > > [snip]
> > > :I would use a G3SEK tetrode board, this board will give your tetrode
good
> > > :protection. It is available in the USA. It has screen and grid
regulators
> > > :plus numerous protection measures. A good product overall, although
there
> > > :is some messing about when you want to use different screen voltages,
> > > :pity they did not specify all the component values for all the
popular
> > > :tubes. My only criticism for this board which is sold as a complete
> > > :sollution.
> > >
> > > The board is a nice way for a newbie builder to properly set up a
tetrode

> > > with less mistakes, but it's not the only thing out there. Older ARRL
> > > Handbooks are also very helpful.
> > > You should be into building it yourself to learn something. Half the
> > > battle is the homework.
> > >
> > > cheers
> > > skipp
> > >
> > > ps the tube will really put out a nice signal in SSB AB1 operation.
> > >
>

1615. Re: Will this blow-up?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Bruce Anderson <W1LUS@worldnet.att.net>
Message-ID: <38BF34DC.935EAFC2@worldnet.att.net>
Source record: 62919

The LM337 will not mind the 1V RMS in its control leg. What you have to aviod is adding any DC resistance in the control leg. It will cause the DC output voltage to increase. A transformer will allow you to couple in the sinewave without adding DC resistence. Or if there already is a resistor in the control leg leave it there and use a capacitor to couple in the sinewave.

73 Bruce

JW wrote:

> I built a small "static" tube-tester which just measures the difference
> in plate current for a 1Volt change in grid bias. That's easy, I just
> change the pot in the control leg for a 1V change in output from an
> LM337.
>
> To get a little more complicated, however, I was wondering if one could
> "modulate" an LM337 in its "adjustable" mode by lifting the control leg
> from ground and inserting a 1V RMS sine wave. I have done this to make
> an adjustable 0-30V negative supply simply by inserting a positive
> reference in the control loop. (As you know, the lower limit of the
> LM337 is -1.25 unless you insert +1.25).
>
> How angry is the LM337 goint to be if it is modulated in this fashion?
> I was thinking of only a 1kHz sine wave.
>
> Well, it's on to the breadboard.

1616. Free: rotary switch parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: k7itm@aol.com.nospam
Message-ID: <20000303015854.02519.00000172@ng-cc1.aol.com>
Source record: 62920

I just posted a message with more details over in r.r.a.boatanchors: free to a good home, about 15 pounds of parts to build rotary switch wafers, mostly phenolic but some fiberglass and some (?) polycarbonate. Silver plated rotary contacts of various sizes; silver and gold plated fixed contacts. Pick up nr. Everett, Wa, or pay me to ship them.

Cheers,
Tom

1617. Power Supply Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000303022902.00510.00004170@ng-de1.aol.com>
Source record: 62921

I came across 4 Switching type power supplies rated at 15v 150 Amp each. Trouble is the power input to them is 3 phase. The input is a three phase rectifier and filter. The filter caps are a couple of big computer grade jobs rated at 200VDC. Looks like this should develope about 150VDC to supply to the inverter section of the power supply. I want to run this off of single phase power, any suggestions on how to do this would be appreciated. I was considering buiding an external 150vdc supply and connecting it to all three phases.

1618. Homebrew Multimode

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Benjamin Packard <BenPackard@email.msn.com>
Message-ID: <OlwyILOh$GA.202@cpmsnbbsa04>
Source record: 62922

I'm looking to build a mulitmode for my laptop. I've noticed articles about things like the poorman's packet, but can't find any sites with schematics. Any help would be appreciated. Thanks.
-Ben
(I mainly want to get WeFax and data during a coastal sailing trip)

1619. Help : Valve audio generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: administrator <bestdeal@cwcom.net>
Message-ID: <yYLv4.13743$Gl6.19493@news2-hme0>
Source record: 62923

Dear Community :

I am looking for a circuit diagram for an valve audio generator,
would you like to paoint me in the right direction please ?

Thanks

Al from London

1620. WIFB Article on QRP Transmitters and 2N2222's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <ucPv4.720$D7.13383@news.itd.umich.edu>
Source record: 62924

Hello group!

I hope I can get someone with back issues of QST to help here. Around 80/81 W1FB, Doug DeMaw, wrote some QRP Xmitter articles with schematics. The particular article I am looking for was a revisit and modification of an earlier project related article. I had a copy of the article and have misplaced/lost it.

The article describes the modification of the final amp of a QRP transmiter by adding transistors in parallel and driving them to produce more power. There were 4 transistors in the final and they were 2N2222. The transistors were epoxied to the cobbled up heat sink of PC board. He used ferrite beads on the leads of the transistors to keep from radiating at VHF.

This is all of the description I have. I do not know the particular frequency/band that the article project was for. I would like to get this article for potential modification of my RAMSEY qrp rigs. I did order the 30 meter version of the QRP rig and the 30 Meter version of the linear amp.

I also have the 20 meter unit. Modifying them would be interesting.

Thanks in advance

Curtis Scholl
cscholl@izzy.net

1621. Re: Homebrew Multimode

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38BFC5B5.84DF6FF1@sympatico.ca>
Source record: 62925

Benjamin Packard wrote:
>
> I'm looking to build a mulitmode for my laptop. I've noticed articles about
> things like the poorman's packet, but can't find any sites with schematics.
> Any help would be appreciated. Thanks.
> -Ben
> (I mainly want to get WeFax and data during a coastal sailing trip)

Choice 1: a sound card.

Choice 2: a Hamcomm-style interface.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

1622. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8bvkbs.5iu.root@radioactivex.lebesque-al.net>
Source record: 62926
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>Linearity, to me, means that the response of a system (the antenna) to
>one input (signal) is independent of its response to any other signals.
>That immediately tells me that the response to some signal we wish to
>receive will not be changed by some other field around, or current in,
>or voltage across the feedpoint of, our antenna.

Linearity => An operation is linear if op(aX + bY) = a*op(X) + b*op(Y)
a,b complex, X,Y functions

multiplication by a scalar is linear, squaring is not, etc...

1623. FA/tubes/capacitors/amplifier RF deck

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000303102832.02493.00000160@ng-ca1.aol.com>
Source record: 62927

Take a look
http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewListedItems&userid=kb5mer@aol.com

1624. Re: (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Sid Washer <sw10@is4.nyu.edu>
Message-ID: <38BFE291.1591ECAE@is4.nyu.edu>
Source record: 62928

unsubscribe ham-hombrew

That's not how you do it. Sorry.

1625. Premier Rack Cabinet F.S.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Sid Washer <sw10@is4.nyu.edu>
Message-ID: <38BFE5DF.97F94DA3@is4.nyu.edu>
Source record: 62929

For Sale; Premier 19" rack cabinet, approx. 6'2" tall on its rubber wheels, rear door, rails front and rear. Colour is the usual Premier wrinkle texture blue. Excellent condition. Has many blank panels in it and it has been standing in my all-too-small apartment, wrapped in plastic sheet, taking up space since 1978.
$350.00 will get it, delivered within 200 miles of New York City; it's too big and heavy for me to to ship.
bye, sid KC2COO

1626. Re: Help : Valve audio generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38BFE701.90E77C4B@agilent.com>
Source record: 62930

The HP 200CD oscillator is an example of a valve audio generator. There are also Heath valve audio generators along the same lines. I might be able to send you a .gif of one or the other if you can't find it locally. The HP design is a classic, and may well be on a website somewhere. It's the design that got Bill and Dave started in business over 60 years ago.

Cheers,
Tom

administrator wrote:
>
> Dear Community :
>
> I am looking for a circuit diagram for an valve audio generator,
> would you like to paoint me in the right direction please ?
>
> Thanks
>
> Al from London

1627. Re: WIFB Article on QRP Transmitters and 2N2222's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <38BFE181.DAFA7D9C@email.mot.com>
Source record: 62931

Hmmm, real low QRP. 2N2222 are GP NPN devices for switching, osc, amps,
etc. but no real power. They undoubtedly were the metal case versions.
Moto has plastic equiv MPS2222. I'm sure there's a slew of other
similar
devices.

Chuck KD9JQ

http://www.mbn.net/kd9jq/hamradio

Curtis Scholl wrote:
>
> Hello group!
>
> I hope I can get someone with back issues of QST to help here. Around
> 80/81 W1FB, Doug DeMaw,
> wrote some QRP Xmitter articles with schematics. The particular article I am
> looking for
> was a revisit and modification of an earlier project related article. I had
> a copy of the article and have misplaced/lost it.
>
> The article describes the modification of the final amp of a QRP
> transmiter by adding transistors in parallel and driving them to produce
> more power. There were 4 transistors in the final and they were 2N2222. The
> transistors were epoxied to the cobbled up heat sink of PC board.
> He used ferrite beads on the leads of the transistors to keep from radiating
> at VHF.
>
> This is all of the description I have. I do not know the particular
> frequency/band that the article project was for. I would like to get this
> article for potential modification of my RAMSEY qrp rigs. I did order the 30
> meter version of the QRP rig and the 30 Meter version of the linear amp.
>
> I also have the 20 meter unit. Modifying them would be interesting.
>
> Thanks in advance
>
> Curtis Scholl
> cscholl@izzy.net

1628. Re: Cherche module Pll Fm broadcast

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38bf056d.2511493@news.online.no>
Source record: 62932

On Fri, 3 Mar 2000 20:52:45 +0100, "Carreyn Thierry"
<carreyn.thierry@skynet.be> wrote:

>Je cherche modules Pll Fm broadcast 88-108Mhz watts
>+ amplificateur large bande 88-108 Mhz in 5 W out 100w
>avez vous qq chose me porposer???
>+codeur st r ophonique.
>carreyn.thierry@skynet.be
>
>
>
think you are better off if you post such requests to
sci.electronics.... newsgroups
Norsk Marconi made such years ago, but think it is some French
equipment now in use here, like LGT (?)

jan-martin

1629. Re: Homebrew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8bvsha.49c.X@animas.frontier.net>
Source record: 62933

On Fri, 03 Mar 2000 01:08:57 GMT, robert leavitt wrote:
>I am looking for instructions for building homebrew single lever or iambic
>paddles.

See March, 2000 QST.

73
Jonesy

--
SK

--
Marvin L Jones jonz--AT>>frontier.net | W3DHJ
Gunnison, Colorado | Jonesy
7,703' -- 2,345m | DM68mn

1630. Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Ash <ash@vvv.tf>
Message-ID: <38BFF959.DD66B19D@vvv.tf>
Source record: 62934
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Hi,
living quarter of a mile away from a powerful pager-system transmitter
makes
dx-ing rather difficult, interference spread over a BIG spectrum and I
need to
make some filters for 169.5-170MHz to put in front of the pre-amps,
anyone have any good designs/schematics for easy-to-build filters?

//Ash

1631. DTMF/CTCSS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Brian <schousek@yahoo.com>
Message-ID: <89ov1q$30v$1@jair.pressenter.com>
Source record: 62935

Just a heads up that the Feb 21 2000 Electronic Design magazine has a design idea from Mr. Paul Woods on a DTMF/CTCSS decoding circuit for older radios where this feature isn't present. I know I'd looked for this once upon a time and DTMF decoding often comes up as a topic here.. URL follows:

http://www.elecdesign.com/magazine/2000/feb2100/ifd/0221ifd1.shtml

Brian Schousek
KB9TBB

1632. Re: Repeater controller circuit???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: terry@gated.net
Message-ID: <38c00606.1905625@news.gate.net>
Source record: 62936

"Bill and Tracy" <tmbc@nf.sympatico.ca> painstakingly scribbled:

->Can any tell me where I can find a homebrewed repeater controller.
I don't
->need anything too fancy. I would just like it to have a courtesy
tone, and
->an automatic link timer shut off. Thanks in advance.
-

Bill, take a look at the Hamtronics board. Comes as a kit, works
great, easy to modify, etc... I used one in 220 machine for years with
0 problems. (It's the Hamtronics group on NY State. Don't remember the
address. :(

GL!

73--Terry/WB4FXD in Ft. Lauderdale, FL

==========
E-MAIL REPLY
*** Please use fsimonds[at]gate[dot]net for e-mail ***
*** Address in header is ANTI-SPAM attempt ***
Thanks!
==========

1633. signal generator vs. waveform generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: gagnon@gagnon.fakeu-net.com
Message-ID: <38c00cf8.613613@news.u-net.com>
Source record: 62937

What is the difference between a signal generator and a waveform generator? If a waveform generator can output a sine waves at HF could it not be used as an RF signal generator?

Larry MW0AWC

1634. Re: Power Supply Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000303144541.03256.00000035@ng-fl1.aol.com>
Source record: 62938

forget it ,it can`t be done..

1635. Looking for "QRP Power" book

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Jarek Misiak <jmis@po.opole.pl>
Message-ID: <GHUv4.27861$WD.712780@news.tpnet.pl>
Source record: 62939

Hello everybody !

I am looking for "QRP Power" book. I searching this one by internet but in all places its ended :-) (Amazon , ARRL, etc.) I wont to buy and pay credit card. I bougt this way a few good RSGB books last year. Can anybody help me ??

73! Jarek SP6OJK

1636. Re: signal generator vs. waveform generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38C0130F.E38@pop.removethistomailme.net>
Source record: 62940

Larry Gagnon wrote:
>
> What is the difference between a signal generator and a waveform
> generator? If a waveform generator can output a sine waves at HF could
> it not be used as an RF signal generator?
>
> Larry MW0AWC

Sure. Usually a waveform or "function" generator tunes lower in
frequency than a "signal" generator. Most go down to a fraction of a
Hz, and up to a MHz or two.

A signal generator usually stops at a few hundred kHz on the low end,
and goes up through whatever MHz or GHz it's rated for. They're more
likely to have high-quality, calibrated RF attenuators, while a function
generator's attenuator usually consists of an uncalibrated or
relative-reading pot. Frequency calibration and high-frequency
stability is likely to be better in a "signal generator" than a
"waveform generator," although that's not necessarily true of newer
digital models.

Most RF signal generators are designed for sine-wave output only.
Waveform/function generators put out a variety of waveforms (sine,
triangle, sawtooth, square...) and often allow the user to vary the DC
offset and duty cycle of the waveform. These functions are seldom
needed in RF work, but it doesn't hurt to have them as long as you can
still get a relatively-clean sine wave from the instrument.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1637. Re: signal generator vs. waveform generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38C020B6.D9BA739A@agilent.com>
Source record: 62941

The short answer is sure, if it outputs sinewaves at HF it could be used as an RF (HF) signal generator. But you might very soon realize there's more to it than just that. I'd want to ask some application oriented questions:

Do you need the ability to generate arbitrary waveforms, or will you always want a single carrier frequency at a time (perhaps with modulation)? Is the generator capable of accurate modulation of the types you need? What of frequency settability, accuracy and stability? Are spurious outputs (both noise and discrete frequencies) sufficiently low in amplitude? Does it have accurate output signal levels, covering the desired range? Is the user interface what you want? If you are happy with answers to those questions, then you've probably found what you want. So I think the real answer lies deeper than just the method used to generate the carrier. For what you're doing, a very simple fixed-amplitude-output, no-modulation, modest-stability generator may be just the ticket. For someone else (or perhaps for you) you might want tight frequency control, exceptionally low phase noise and the ability to run signal levels up and down between -100dBm and +20dBm. Someone else may want versatile modulation.

The (digital sampling) waveform generators I've seen aren't capable of the low spurious output levels and ease of adjusting modulation that I see in things typically called signal generators, and generally not of accurate output level control over a wide range. On the other hand, typical signal generators can't produce arbitrary waveforms (or essentially arbitrary spectra).

Cheers,
Tom

Larry Gagnon wrote:
>
> What is the difference between a signal generator and a waveform
> generator? If a waveform generator can output a sine waves at HF could
> it not be used as an RF signal generator?
>
> Larry MW0AWC

1638. Re: Looking for "QRP Power" book

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: j.m.franke@larc.nasa.gov
Message-ID: <j.m.franke-0303001656560001@franke.larc.nasa.gov>
Source record: 62942

In article <GHUv4.27861$WD.712780@news.tpnet.pl>, "Jarek Misiak"
<jmis@po.opole.pl> wrote:

> Hello everybody !
>
> I am looking for "QRP Power" book. I searching this one by internet but in
> all places its ended :-) (Amazon , ARRL, etc.) I wont to buy and pay credit
> card. I bougt this way a few good RSGB books last year. Can anybody help me
> ??
>
> 73! Jarek SP6OJK

Go to:
http://www.arrl.org/catalog/f-practical_circuits.phtml

and scan down to QRP Power

John

1639. QRP Reflector / Mail List ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: gdn1@rocketmail.com
Message-ID: <38c32be2.18050810@news.usol.com>
Source record: 62943

I recently went to subscribe to the QRP-L mailing list and see that it's no longer in service , is there another list that has taken its place ? I subscribed to another QRP list but have recieved a grand total of 1 message so far. QRP-L used to have 50-100 messages a day ?

TIA

Gary K8IQ

1640. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-03 00:00:00 UTC
From: Boris Mohar <borism@interlog.com>
Message-ID: <f3u0cskfg9vj2tveq11hr7t1hi369bbqof@4ax.com>
Source record: 62944
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Sat, 26 Feb 2000 03:25:03 GMT, Science Hobbyist <bbeaty@microscan.com>
wrote:

>> I don't buy it. It is like your saying the voltage across or current
>through
>> a resistor determines its resistance. Of course the resistance of a
>resistor
>> can be defined by V/I, but when we talk about a given resistor it is
>> typicaly the cause and the current the effect of the voltage across
>it.
>
> Yep, it's weird and counterintuitive. But it's not nonlinear.
> It's like the example I gave with the capacitor: if you
> charge a capacitor at a 1mA rate, with 1 volt across the
> capacitor, then you're pumping in a millijoule of energy per
> second into the capacitor. But if you let the voltage across
> the capacitor rise to 2 volts, then you're pumping in 2mJ
> per second. Suppose the capacitor is being charged by a 100
> volt power supply with a 100k resistor in series. The higher
> you let the capacitor voltage rise, the higher grows the energy
> flow into the capacitor.

So when after the five time constants the voltage is across the capacitor
is about 99 volts and the current has decayed to less than a milliamp the
"flow of energy" into the capacitor is higher then at time zero?

Regards,

Boris Mohar

Viatrack Printed Circuit Designs

1641. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89pl6maoi1@nnrp1.deja.com>
Source record: 62846
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38BF17FE.833FA7A@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:

> > > Are you suggesting that such antennas are not linear systems?
> > >
> > > Not at all.
> >
> > ...
> >
> Linearity, to me, means that the response of a system (the antenna) to
> one input (signal) is independent of its response to any other
signals.

OK, then suppose we illuminate an antenna with a CW EM wave, then
connect a receiver to detect it. Are you CERTAIN that no other
EM fields can possibly interfere with this process, yet do so
entirely by linear effects?

OK, what if I use a second distant transmitter with
identical frequency? I bet I can create an RF interference
pattern so that the above receiving antenna is in an antinode,
and the received power drops essentially to zero. I've done
it with wave-superposition, which obviously is totally linear.
This stuff with "energy sucking antennas" uses the same
process: it uses the superposition of fields of the SAME
FREQUENCY as the incoming waves. The waves and the antenna's
field are coherent. If you say that one AC field cannot alter
under any circumstances, then maybe you've never encountered
interference patterns.

Because the AC fields originated by the electrically-short
antennas have the same frequency as the incoming waves,
odd things occur which would not occur if the two
frequencies differed. In particular, if the short antenna
surrounds itself with a non-radiating local field which
partially CANCELS OUT the fields of an incoming EM wave,
then nothing nonlinear has occurred. Yet energy has gone
missing from space. The cancelled energy ends up within
the short antenna. Plots of the Poynting vector field show
that the cancellation process deflects the incoming waves so
that they flow into the tiny antenna. Their energy appears
in whatever load is connected.

I've said it several times now but it bears repeating:
"ENERGY SUCKING" ANTENNAS WORK BY TOTALLY CONVENTIONAL

PRINCIPLES. They're only "weird" because they aren't
commonly discussed or analyzed. And, since the same
basic principles apply to half-wave dipoles, the concept
is not weird in the least. It's just "different drummer"
thinking. We normally assume that a half-wave dipole is
purely an absorber, and we usually ignore the fact that all
antenns creates their own local field. It's this local
field which grabs the EM waves out of the air.

> That immediately tells me that the response to some signal we wish to
> receive will not be changed by some other field around, or current in,
> or voltage across the feedpoint of, our antenna.

If you are discussing DC fields, or fields which have
a different frequency than the incoming waves, then you are
right. But as soon as the "other field" has the same frequency
as the incoming waves, then that field gains the ability to
reinforce or to cancel those waves. Earlier I was talking
about synchronous motors as an analogy for "energy
sucking" antennas. I didn't think I had to point out
that synchronous PM motors are SYNCHRONOUS, and that their
rotor-magnets turn at the same frequency as the drive fields.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1642. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c04932.85409650@news.online.no>
Source record: 62847
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Fri, 03 Mar 2000 17:41:53 GMT, Ash <ash@vvv.tf> wrote:

>Hi,
>living quarter of a mile away from a powerful pager-system transmitter
>makes
>dx-ing rather difficult, interference spread over a BIG spectrum and I
>need to
>make some filters for 169.5-170MHz to put in front of the pre-amps,
>anyone have any good designs/schematics for easy-to-build filters?
>
>//Ash
>
single quarterwave with RG213 may attenuate 30dB, twin filter possibly
60dB, but need some impedance correction on 144MHz to minimise losses
if you choose twin filter

73 jan-martin
LA8AK

1643. Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c05b7c.90091746@news.online.no>
Source record: 62848
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

wonder what is acceptable limit of grid current in a 2x 6146B
amplifier?
ALC voltage is often derived from varying grid current over bias
network resistors, usually around 10k resistance. 1mA grid current
will develop 10V voltage drop.

Coupled via a 0.002uF capacitor to a voltage doubling rectifier with
output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
A feasable voltage, the ALC circuit may not have any real function at
all
I modified the FL-dx-500 and received very good reports for improving
readability, but it still seems that few mA grid current is within
acceptable limit of grid current for this sort of amplifier using 2x
6JS6A or 6146B

73 jan-martin
LA8AK

1644. Idea for transceive R-4C and FT-902

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c060a8.91416288@news.online.no>
Source record: 62849

what is the best idea for transceive operation with R-4C (5646kHz IF)
and FT-902 (8.9MHz IF)
FT-902 VCO may have somewhat high noise level, while R-4C pre-mixer
output is not particularly clean

suggestions?

73
jan-martin
LA8AK

1645. Re: Cheapie Quickie Ten-r

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: mojaveplan@aol.com
Message-ID: <20000303214150.03146.00000104@ng-fo1.aol.com>
Source record: 62850

what is the cheapie quickie ten r? do you have a magazine article or better yet a website for it? i imagine you want the 555 to do sidetone for you. if that is the case, a couple of transistor switches should do the trick. one to key the tx and one to key the sidetone. 73
jeff n7aiz

1646. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <KT_v4.4223$vd7.126791@bgtnsc04-news.ops.worldnet.att.net>
Source record: 62851
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

J M Noeding wrote in message <38c04932.85409650@news.online.no>...
>On Fri, 03 Mar 2000 17:41:53 GMT, Ash <ash@vvv.tf> wrote:
>
>>Hi,
>>living quarter of a mile away from a powerful pager-system transmitter
>>makes
>>dx-ing rather difficult, interference spread over a BIG spectrum and I
>>need to
>>make some filters for 169.5-170MHz to put in front of the pre-amps,
>>anyone have any good designs/schematics for easy-to-build filters?
>>
>>//Ash
>>
>single quarterwave with RG213 may attenuate 30dB, twin filter possibly
>60dB, but need some impedance correction on 144MHz to minimise losses
>if you choose twin filter
>
>73 jan-martin
>LA8AK

I think that jan-martin is recommending a stub, but I'm not sure. If you take a 1/4 wavelength long
piece of coax, and keep one end open circuit, the other end will appear to be a short circuit.
So you can simply "Tee" the stub into your antenna transmission line. However, the Q might be low enough to
degrade the wanted signal that is 26 MHz lower.
Al

1647. Re: QRP Reflector / Mail List ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: nielsen@primenet.com
Message-ID: <slrn8c0ukp.2c9.nielsen@bob.localnet>
Source record: 62852

It's still going strong. There was a web site for QRP-L which is no
longer there, but you can subscribe by sending a message to
listserv@lehigh.edu with the following line in the body of the message:

subscribe qrp-l [your name] [your callsign]

Further information is at http://www.qrparci.org/qrplacc.htm

Bob, N7XY

On Fri, 03 Mar 2000 22:19:56 GMT, Gary wrote:
>I recently went to subscribe to the QRP-L mailing list and see that
>it's no longer in service , is there another list that has taken its
>place ? I subscribed to another QRP list but have recieved a grand
>total of 1 message so far. QRP-L used to have 50-100 messages a day ?
>
>TIA
>
>Gary K8IQ

--
Bob Nielsen, N7XY (RN2) nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 SOC #77 http://www.primenet.com/~nielsen

1648. Re: QRP Reflector / Mail List ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: nielsen@primenet.com
Message-ID: <slrn8c0uvv.2e0.nielsen@bob.localnet>
Source record: 62853

That web site (in another area) showed it as listproc, not listserv.

On 4 Mar 2000 02:53:14 GMT, Bob Nielsen wrote:
>It's still going strong. There was a web site for QRP-L which is no
>longer there, but you can subscribe by sending a message to
>listserv@lehigh.edu with the following line in the body of the message:
>
>subscribe qrp-l [your name] [your callsign]
>
>Further information is at http://www.qrparci.org/qrplacc.htm
>
>Bob, N7XY
>
>On Fri, 03 Mar 2000 22:19:56 GMT, Gary wrote:
>>I recently went to subscribe to the QRP-L mailing list and see that
>>it's no longer in service , is there another list that has taken its
>>place ? I subscribed to another QRP list but have recieved a grand
>>total of 1 message so far. QRP-L used to have 50-100 messages a day ?
>>
>>TIA
>>
>>Gary K8IQ
>
>
>--
>Bob Nielsen, N7XY (RN2) nielsen@primenet.com
>Tucson, AZ DM42nh QRP-L #1985 SOC #77 http://www.primenet.com/~nielsen
>

--
Bob Nielsen, N7XY (RN2) nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 SOC #77 http://www.primenet.com/~nielsen

1649. Re: Help- Plans for Simple Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: maddog@io.com
Message-ID: <38c096f5.145874183@news.io.com>
Source record: 62854

On Thu, 02 Mar 2000 03:23:36 GMT, "NANCY GIANAKOPOULOS"
<n.gianakopoulos@worldnet.att.net> wrote:

>To any interested parties, give me a shout if you need a schematic for a
>product detector that is based on an NE-602. I have a proven design that I
>have been using in my own receivers for the past several years.

Is there something unique about your use of the NE602?

73,
monty N5FC

1650. Re: Iambic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: maddog@io.com
Message-ID: <38c09868.146244632@news.io.com>
Source record: 62855

On Wed, 01 Mar 2000 16:17:27 GMT, "robert leavitt"
<leavittkid@mediaone.net> wrote:

>I am looking for instructions for building a non PIC electronic iambic
>keyer.

Drew, if you're interested in building something out of CMOS
discretes, look at my site for a project I think you'll like:

http://www.io.com/~maddog/hamradio/index.html

73,
monty N5FC

1651. Help.... need schematic for Yesu 709R and Radioshack HTX-202

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Bruce Rhodes <bruceeee@ihug.co.nz>
Message-ID: <4pj1cs4km890ug0hr13ssbf33c0vju4a4i@4ax.com>
Source record: 62856

I am after the schematic's for a Yesu CFT709 and a Radioshack HTX-202
I have a project for a SAR cross band repeater for and need to get at
the the PLL's to controll them with a micro....

Could anyone please scan thier beloved schematic diagrams and post or
email them to me??.

Thanks in advance...

Bruceeee, ZL1UBR

1652. Re: Homebrew Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Carel Mulder <cmulder@casema.net>
Message-ID: <38C0EE55.32040C4@casema.net>
Source record: 62857

robert leavitt wrote:
>
> I am looking for instructions for building homebrew single lever or iambic
> paddles.
>
Surf to the NorCal Page (http://www.fix.net/norcal.html)
and read the articles from NB6M and PA0CMU.

Succes,
Carel PA0CMU.

1653. Re: signal generator vs. waveform generator?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000304131305.03818.00000178@ng-cg1.aol.com>
Source record: 62858

Waveform generators usually go from a few HZ to about 20 mhz or less,they have sine, square,rect,sawtooth etc.output varing up to about 20 Volts peak to peak ..the sig generator usually has sine wave output and can have AM modulation,FM mod,etc. frequency usually starts in low KHZ and may go into GHZ range ,they have a calibrated attenuator in the output and output can be set from a tenth of a microvolt to maybe 1 volt.RMS. Harold W4PQW

1654. Re: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: oN <NOSPAM@EUNET.YU>
Message-ID: <89rkl8mlg1@SOLAIR2.EUnet.yu>
Source record: 62859
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Tjah,
I already have some relay's. If anybody need some parts, come into Surchin (15 Km from Belgrade) in museum. You can take how many you want,

--
All the best,
Proka
VHF <walkie-talkie@europe.com> wrote in message 895j1e$367$2@SOLAIR2.EUnet.yu...
Make an offer.

http://www.geocities.com/FashionAvenue/Runway/7439/f117.jpg

1655. RF gain

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Hamelton@webtv.net
Message-ID: <11684-38C151D2-8@storefull-123.iap.bryant.webtv.net>
Source record: 62860

I have a AM FM antenna amp with 22 db.
What is the formula for arriving at 22db if there is one?
73,
Will

1656. Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Hamelton@webtv.net
Message-ID: <11682-38C152DE-62@storefull-123.iap.bryant.webtv.net>
Source record: 62861

I am looking for the schematic for a linear amp for 10 meter somewhere
between 50 watts to 100 watts.
Will

1657. Re: Non inductive resistors/sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38C16E60.F286C05D@hotmail.com>
Source record: 62862

Fair radio sales has some, and RF parts too, check their web sites.

wb wrote:

> I am looking for some non inductive resistors of about 100 to 150 watts in
> 12.5 , 200 and 450 ohm. Can anyone suggest some sources? Dale makes some
> resistors that are claimed to be non inductive, or close to it, would these
> be suitable for a grid termination for a tetrode amp?
>
> will

1658. NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: n8tgc <nospam_arnaut@prodigy.net>
Message-ID: <89rklu$a45g$1@newssvr03-int.news.prodigy.com>
Source record: 62863
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

Does anyone have a datafile or specsheet on the NE602 mixer IC? I am working on a couple of projects where the 602 would work great, I just need a bit more info.

If you can lend a hand..Thanks!

73
N8TGC

1659. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <1879-38C188A5-57@storefull-127.iap.bryant.webtv.net>
Source record: 62864

GOING TO DRIVE IT WITH 5 WATTS I ASSUME

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

1660. Re: Fractal antenna for 2 metres?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <89s5rsgfv1@plutonium.btinternet.com>
Source record: 62865

Dave asks -
> Apart from a load of bent wire what do I need?
==========
An enquiring, perhaps suspicious mind.

Before picking up your hammer, ask yourself what great benefits, if any, do you expect to accrue over and above those available from an ordinary beam constructed of the same number of elements. It is essential to think in numerical/quantitative terms, such as relative forward gain, front-to-back ratio, radiating efficiency and bandwidth.

Do you intend to write a paper on the subject ? Best to leave that decision until after you have completed the field and anechoic-chamber measurements.

BTW, have you considered investigating the crossed-field antenna. (CFA).

Reg, G4FGQ

1661. check this out!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: K9VDD <k9vdd@tds.net>
Message-ID: <O%gw4.1344$uY5.384306@ratbert.tds.net>
Source record: 62866

http://www.qsl.net/k9vdd/k9vdd.htm

1662. Re: RF gain

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38C19612.1E82CB2C@cmcorp.com>
Source record: 62867

Will Hamelton wrote:

> I have a AM FM antenna amp with 22 db.
> What is the formula for arriving at 22db if there is one?
> 73,
> Will

It's a measure of the ratio of power in to power out. (Gain)

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1663. FA Collins Mechanical Filter, Fixed channel HF/SSB RX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Steve Lenaghan <tamerica@prairie.ca>
Message-ID: <38C1A0F6.10D1BAB7@prairie.ca>
Source record: 62868
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,alt.ham-radio.marketplace

I am down to the last few of these

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=268528047

73, Steve VE4LR

1664. Re: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: Prince of Coyotes <fdecker@catskill.net>
Message-ID: <sc3po8nqee6147@corp.supernews.com>
Source record: 62869
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Keep them, I understand Yugoslavia (that is, Serbia) needs a new Air Force.
"oN" <NOSPAM@EUNET.YU> wrote in message news:89rkl8mlg1@SOLAIR2.EUnet.yu...
Tjah,
I already have some relay's. If anybody need some parts, come into Surchin (15 Km from Belgrade) in museum. You can take how many you want,

--
All the best,
Proka
VHF <walkie-talkie@europe.com> wrote in message 895j1e$367$2@SOLAIR2.EUnet.yu...
Make an offer.

http://www.geocities.com/FashionAvenue/Runway/7439/f117.jpg

1665. FS Simplex Telephone Interconnect

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-04 00:00:00 UTC
From: rnelson@farmtel.net
Message-ID: <38c19144.75262355@news.mwci.net>
Source record: 62870

IDA Corp model 40-15 simplex or repeater operation.
Service manual included.
Programmable access code from 1 to 3 digits for added security.
Also has reverse ring-out ability.
Excellent condition.

$ 250.00 OBO

Please reply via e-mail

Randy, WB0VHB

1666. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8a0nmbvcc1@nntp5.atl.mindspring.net>
Source record: 62795
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

In article <89u1sh$12fk$1@newssvr04-int.news.prodigy.com>,
n8tgc <nospam_arnaut@prodigy.net> wrote:
>
>Yea, I already thought of that. However the NE602 is NOT a Phillips
>manufactured chip.

Yes it it. Signetics has been owed by Philips since the early 1970's.
Back in the late '80s, they dumped their various regional names
(Signetics, Mullard, Valvo, ...) in favor of the worldwide use of
Philips.

>Therefore they only have a collection of application
>notes. They do not have a complete specsheet on the device.

Try looking under the extended temperature range number, SA602, I think.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1667. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38C1B105.DA407287@sympatico.ca>
Source record: 62871
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

n8tgc wrote:
>
> Does anyone have a datafile or specsheet on the NE602 mixer IC? I am
> working on a couple of projects where the 602 would work great, I just need
> a bit more info.

Every semiconductor manufacturer has had all this stuff on line for
ages.
Do a search at http://www.semiconductors.philips.com
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

1668. Re: Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c11077.5876435@news.online.no>
Source record: 62872
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On Fri, 03 Mar 2000 23:37:37 -0500, Steve <amradio@thebizlink.com>
wrote:

>What class of service, AB1, AB2 or C?
>
>
>> wonder what is acceptable limit of grid current in a 2x 6146B
>> amplifier?
>> ALC voltage is often derived from varying grid current over bias
>> network resistors, usually around 10k resistance. 1mA grid current
>> will develop 10V voltage drop.
>>
>> Coupled via a 0.002uF capacitor to a voltage doubling rectifier with
>> output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
>> A feasable voltage, the ALC circuit may not have any real function at
>> all
>> I modified the FL-dx-500 and received very good reports for improving
>> readability, but it still seems that few mA grid current is within
>> acceptable limit of grid current for this sort of amplifier using 2x
>> 6JS6A or 6146B
>>
for my FT-902 (or HW-100) it is probably AB1

1669. Re: Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Gary - KJ6Q <davison7@gte.net>
Message-ID: <rGjw4.1490$Mn4.138495@dfiatx1-snr1.gtei.net>
Source record: 62873
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

I would more suspect AB2...
--
Gary - KJ6Q
= = = = = = = =
Political destruction of our second amendment,
a new "Boston tea party" in the making...

J M Noeding <LA8AK@online.no> wrote in message
news:38c11077.5876435@news.online.no...
> On Fri, 03 Mar 2000 23:37:37 -0500, Steve <amradio@thebizlink.com>
> wrote:
>
> >What class of service, AB1, AB2 or C?
> >
> >
> >> wonder what is acceptable limit of grid current in a 2x 6146B
> >> amplifier?
> >> ALC voltage is often derived from varying grid current over bias
> >> network resistors, usually around 10k resistance. 1mA grid
current
> >> will develop 10V voltage drop.
> >>
> >> Coupled via a 0.002uF capacitor to a voltage doubling rectifier
with
> >> output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
> >> A feasable voltage, the ALC circuit may not have any real
function at
> >> all
> >> I modified the FL-dx-500 and received very good reports for
improving
> >> readability, but it still seems that few mA grid current is
within
> >> acceptable limit of grid current for this sort of amplifier using
2x
> >> 6JS6A or 6146B
> >>
> for my FT-902 (or HW-100) it is probably AB1
>

1670. wtb manual for TS-2963/USQ-46

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: DETROIT47 <detroit47@mediaone.net>
Message-ID: <38C1D28F.AE137CA7@mediaone.net>
Source record: 62874

Hi
I need a manual schematic etc......
Thanks N8QPC

1671. Re: Fractal antenna for 2 metres?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000305051650.02127.00000148@ng-fy1.aol.com>
Source record: 62875

>Dave asks -
>> Apart from a load of bent wire what do I need?
>========================
>An enquiring, perhaps suspicious mind.
>
>Before picking up your hammer, ask yourself what great benefits, if
>any, do you expect to accrue over and above those available from an
>ordinary beam constructed of the same number of elements. It is
>essential to think in numerical/quantitative terms, such as relative
>forward gain, front-to-back ratio, radiating efficiency and
>bandwidth.
>
>Do you intend to write a paper on the subject ? Best to leave that
>decision until after you have completed the field and anechoic-chamber
>measurements.
>
>BTW, have you considered investigating the crossed-field antenna.
>(CFA).
>---
>Reg, G4FGQ
>
>

This is EXACTLY the kind of crank message from a few hams that has produced and fueled one of ham radio's major flame subjects, and one of the worst chapters in it's history, resulting in its apex of: 1) fraudulent, racist hoaxing by a ham that never even saw a fractal antenna; 2) death and harmful intent threats caste upon a professional, academic antenna designer by an errant radio amateur; 3) virulent rumors of fraud, and reason for suspicion against an expert in the antenna field.

Reg--

You suggest reasons for being suspicious. OK, let's bite. In fact, take off a BIG chunk. Go the the original references on fractal antenna articles--and there are now about 100 of them in professional and amateur journals and magazines alike--and give the good people on this NG some basis for being suspicious.

I should like to inform those on this NG the 'Reg' has been a profound antagonist on this subject--ignoring information and data if he felt that it did not feed into his objective: to produce and fan a flame and injure the reputation of me.

The relevant question--so posed by my colleague at RPI--stands: what is the basis for the flame war. Looking at Reg, you see the answer.

Objectively, scientifically, there is no basis for flame other than to attack someone who merely tried to help.

Nathan Cohen, Ph.D.
N1IR

1672. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <89tvbl$761$1@SOLAIR2.EUnet.yu>
Source record: 62876
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1673. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: n8tgc <nospam_arnaut@prodigy.net>
Message-ID: <89u1sh$12fk$1@newssvr04-int.news.prodigy.com>
Source record: 62877
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

Yea, I already thought of that. However the NE602 is NOT a Phillips manufactured chip. Therefore they only have a collection of application notes. They do not have a complete specsheet on the device.

N8TGC

>Every semiconductor manufacturer has had all this stuff on line for
>ages.
>Do a search at http://www.semiconductors.philips.com
>--
>Laura Halliday VA3LDH "Laisse le vent tout emporter..."
>Grid: FN03gs - Foly/Viennet

1674. Re: RF gain

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <6Sxw4.4949$Pq3.360861@bgtnsc05-news.ops.worldnet.att.net>
Source record: 62878

Thomas C. Sefranek wrote in message <38C19612.1E82CB2C@cmcorp.com>...
>
>
>Will Hamelton wrote:
>
>> I have a AM FM antenna amp with 22 db.
>> What is the formula for arriving at 22db if there is one?
>> 73,
>> Will
>
>It's a measure of the ratio of power in to power out. (Gain)
>
>--
> *
> | __O Thomas C. Sefranek tcs@cmcorp.com
> |_-\<,_ Amateur Radio Operator: WA1RHP
> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>
>http://hamradio.cmcorp.com/inventory/Inventory.html
>http://www.harvardrepeater.org
>

The gain in dB is 10 * log base 10 (Pout/Pin.)
Or vica versa,
Solve for linear: Gain= 10^ (dB/10)

dB to linear: 10^(22/10)= 158.5

linear to dB: 10 * log 158.5 = 22 dB.

So if 1 mW of power was at the amplifier's input, the output would have 158.5 mW.
0 dBm 22.0 dBm.
Al

1675. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <gYxw4.4959$Pq3.362211@bgtnsc05-news.ops.worldnet.att.net>
Source record: 62879

Bill Turner wrote in message <1879-38C188A5-57@storefull-127.iap.bryant.webtv.net>...
GOING TO DRIVE IT WITH 5 WATTS I ASSUME

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

Those "10" meter rigs have 5 watts power maximum available to the output stage,
i.e., supply voltage / output stage current, so the actual output power will be less than 5 watts.
But I do see your one band away point, Bill.
Al

1676. Re: An optical allusion that will astound you, works on all spec pc's:) 4619

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Paul <paul@smithytowers.freeserve.co.uk>
Message-ID: <hrb5cskedl34fde8ldtpsn9u1d0rn6fu71@news.freeserve.net>
Source record: 62880
Cross-posted to:
rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet

The file contained the SubSeven.backdoor.v21G trojan. See
http://www.symantec.com/avcenter/venc/data/sub.seven.20.html

1677. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Hamelton@webtv.net
Message-ID: <866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net>
Source record: 62881

Yes. I do have 25 watts on ssb.

1678. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c29a80.55014090@news.online.no>
Source record: 62882
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

On Sun, 5 Mar 2000 11:25:05 -0500, "n8tgc" <nospam_arnaut@prodigy.net>
wrote:

>
>Yea, I already thought of that. However the NE602 is NOT a Phillips
>manufactured chip. Therefore they only have a collection of application
>notes. They do not have a complete specsheet on the device.
>
>N8TGC
>
>
perhaps since it is obsolete, try SA602 or NE612

LA8AK

1679. Wanted QEX, Jan/Feb 1998 article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Martin John Hallsworth <Martin@g1gyc.demon.co.uk>
Message-ID: <952284914.8832.0.nnrp-02.9e98acde@news.demon.co.uk>
Source record: 62883
Cross-posted to: alt.ham-radio.vhf-uhf,misc.industry.electronics.marketplace,rec.radio.amateur.homebrew,rec.radio.amateur.misc, sci.electronics.components,uk.radio.amateur

Hello,
I am looking for a copy of he article by Randy, WI5W,
on using microwave oven transformers that was published
in QEX, Jan/Feb 1998.

please email me if you can help
Thanks Martin

1680. 23 cm. antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Hauge <hauge@CUThrcnet.dk>
Message-ID: <89uf11$207$1@news.cybercity.dk>
Source record: 62884

Hi

Has anybody a good (simple) drawing to build a 23 cm. yagi antenna ?? Maby a link to inet, i can't find anything usefull..

Thanks
/Hauge

1681. Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Ron H <rnharsh@visi.com>
Message-ID: <xwzw4.463$F7.11436@ptah.visi.com>
Source record: 62885

I am planning a new amp and noticed that most of the newer designs do not use inductive chokes in the high voltage supply. Back when I learned about such things a filter choke was considered essential for good hum filtering with variable (keyed) loads..... What's the story? Should I use a choke or go with the newer design (and cheaper) and use only caps????

73 K3PID rnharsh@visi.com

1682. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <89um3k$j41$1@nnrp1.deja.com>
Source record: 62886
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <f3u0cskfg9vj2tveq11hr7t1hi369bbqof@4ax.com>,
Boris Mohar <borism@interlog.com> wrote:
> On Sat, 26 Feb 2000 03:25:03 GMT, Science Hobbyist <bbeaty@microscan.com>
> wrote:
> > Yep, it's weird and counterintuitive. But it's not nonlinear.
> > It's like the example I gave with the capacitor: if you
> > charge a capacitor at a 1mA rate, with 1 volt across the
> > capacitor, then you're pumping in a millijoule of energy per
> > second into the capacitor. But if you let the voltage across
> > the capacitor rise to 2 volts, then you're pumping in 2mJ
> > per second. Suppose the capacitor is being charged by a 100
> > volt power supply with a 100k resistor in series. The higher
> > you let the capacitor voltage rise, the higher grows the energy
> > flow into the capacitor.
>
> So when after the five time constants the voltage is across the capacitor
> is about 99 volts and the current has decayed to less than a milliamp the
> "flow of energy" into the capacitor is higher then at time zero?

Try using a CAD program or a spreadsheet to plot the energy
flow into a capacitor versus time (when powered by a
100Vdc supply with a 100K resistor.)

The curve starts at zero, ramps up smoothly, comes to
a maximum, then falls back to zero as the current falls.
(The peak power is when the V/I of the capacitor is
100K ohms, which gives an impedance match for
an instant.)

When the Vc is much smaller than Vsupply, and if the
power supply has constant impedance, the energy
absorbed by the capacitor per second depends on the
voltage across the capacitor. If you wished to force the
capacitor to suddenly start absorbing more energy, you
could use another power supply to goose the Vc higher.

This is an analogy for the "energy-sucking antenna",
where a large e-field produced by the antenna can
cause it to receive more signal power from the incoming
EM waves. As with the capacitor, the LC resonant
antenna will create stronger local fields as its stored
energy ramps up, and this increases the absorbed
power, but since this is a 2-dimensional situation
(rather than the 1-D of the capacitor), I think

it means that the received power will rise exponentially
whenever an EM wavetrain first hits the tiny antenna-
resonator.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1683. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c2e640.74408912@news.online.no>
Source record: 62887

On Sun, 5 Mar 2000 10:59:41 -0800 (PST), Hamelton@webtv.net (Will Hamelton) wrote:

>Yes. I do have 25 watts on ssb.
>
on 28.050?

1684. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <38C2FE1A.9FA9B576@dialpoint.net>
Source record: 62888

Chokes cost money and weigh alot. When dealing with RF only, it is just cheaper to go with a bigger filter capacitor. It is doubtful that you will pick up any noticable hum on the RF if the filter is any size at all. That is big enough to keep the voltage from sagging too low from no load to full load current.

Ron H wrote:
>
> I am planning a new amp and noticed that most of the newer designs do not
> use inductive chokes in the high voltage supply. Back when I learned about
> such things a filter choke was considered essential for good hum filtering
> with variable (keyed) loads..... What's the story? Should I use a choke or
> go with the newer design (and cheaper) and use only caps????
>
> 73 K3PID rnharsh@visi.com

1685. Gunnplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Harold Johnson <w4zcb@cytechcis.net>
Message-ID: <x2Dw4.64198$0p1.1628789@news4.giganews.com>
Source record: 62889

A week ago, somebody had some gunnplexers for sale. I was where I could receive and not transmit and now don't have the name or address of the individual. If they are still available, please drop a note to W4ZCB@Cytechcis.net

W4ZCB

1686. Re: Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Steve <amradio@thebizlink.com.removethis>
Message-ID: <amradio-D34251.21141905032000@news.erols.com>
Source record: 62890
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

In article <38c11077.5876435@news.online.no>, LA8AK@Online.NO wrote:

> On Fri, 03 Mar 2000 23:37:37 -0500, Steve <amradio@thebizlink.com>
> wrote:
>
> >What class of service, AB1, AB2 or C?
> >
> >
> >> wonder what is acceptable limit of grid current in a 2x 6146B
> >> amplifier?
> >> ALC voltage is often derived from varying grid current over bias
> >> network resistors, usually around 10k resistance. 1mA grid current
> >> will develop 10V voltage drop.
> >>
> >> Coupled via a 0.002uF capacitor to a voltage doubling rectifier with
> >> output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
> >> A feasable voltage, the ALC circuit may not have any real function at
> >> all
> >> I modified the FL-dx-500 and received very good reports for improving
> >> readability, but it still seems that few mA grid current is within
> >> acceptable limit of grid current for this sort of amplifier using 2x
> >> 6JS6A or 6146B
> >>
> for my FT-902 (or HW-100) it is probably AB1
>

None.

1687. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Boris Mohar <borism@interlog.com>
Message-ID: <nts5cs8376940atptb0b28euds6decgfbh@4ax.com>
Source record: 62891
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Sun, 05 Mar 2000 22:12:07 GMT, Science Hobbyist <bbeaty@microscan.com>
wrote:

>In article <f3u0cskfg9vj2tveq11hr7t1hi369bbqof@4ax.com>,
> Boris Mohar <borism@interlog.com> wrote:
>> On Sat, 26 Feb 2000 03:25:03 GMT, Science Hobbyist <bbeaty@microscan.com>
>> wrote:
>> > Yep, it's weird and counterintuitive. But it's not nonlinear.
>> > It's like the example I gave with the capacitor: if you
>> > charge a capacitor at a 1mA rate, with 1 volt across the
>> > capacitor, then you're pumping in a millijoule of energy per
>> > second into the capacitor. But if you let the voltage across
>> > the capacitor rise to 2 volts, then you're pumping in 2mJ
>> > per second. Suppose the capacitor is being charged by a 100
>> > volt power supply with a 100k resistor in series. The higher
>> > you let the capacitor voltage rise, the higher grows the energy
>> > flow into the capacitor.
>>
>> So when after the five time constants the voltage is across the capacitor
>> is about 99 volts and the current has decayed to less than a milliamp the
>> "flow of energy" into the capacitor is higher then at time zero?
>
> Try using a CAD program or a spreadsheet to plot the energy
> flow into a capacitor versus time (when powered by a
> 100Vdc supply with a 100K resistor.)
>
> The curve starts at zero, ramps up smoothly, comes to
> a maximum, then falls back to zero as the current falls.

This is in contradiction with your statement about dozen lines up:

>> > the higher you let the capacitor voltage rise, the higher grows the energy
>> > flow into the capacitor.

> (The peak power is when the V/I of the capacitor is
> 100K ohms, which gives an impedance match for
> an instant.)

Impedance match? Of what to what?

> When the Vc is much smaller than Vsupply, and if the
> power supply has constant impedance, the energy
> absorbed by the capacitor per second depends on the
> voltage across the capacitor. If you wished to force the
> capacitor to suddenly start absorbing more energy, you

> could use another power supply to goose the Vc higher.

Now you are back on track

> This is an analogy for the "energy-sucking antenna",
> where a large e-field produced by the antenna can
> cause it to receive more signal power from the incoming
> EM waves. As with the capacitor, the LC resonant
> antenna will create stronger local fields as its stored
> energy ramps up, and this increases the absorbed
> power, but since this is a 2-dimensional situation
> (rather than the 1-D of the capacitor), I think
> it means that the received power will rise exponentially
> whenever an EM wavetrain first hits the tiny antenna-
> resonator.

I cannot see how you can compare the DC transient conditions of a simple RC circuit with the AC dynamics of an resonant circuit. Antennas cannot store energy.

Regards,

Boris Mohar

Viatrack Printed Circuit Designs

1688. Re: WIFB Article on QRP Transmitters and 2N2222's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Steve Bauder <sbauder@win.bright.net>
Message-ID: <38C3268E.1E76@win.bright.net>
Source record: 62892

Curtiss:

December '79 has the original "Universal QRP Transmitter" article. I built one of these transmitters for 40 and one for 20...still in use today. I get about 2 watts out with four 2n2222's (plastic) in parallel. I'm not sure about further revisions. Perhaps something in QST's technical correspondence? I'd be happy to send along a copy of the original article. I'll look for revisions in QST for '80 and '81.

73,
Steve, NX9Z

1689. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <2SLDOA06BxInEyIe8j22pv4W+kcV@4ax.com>
Source record: 62893
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Sat, 04 Mar 2000 00:26:02 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>In article <38BF17FE.833FA7A@agilent.com>,
> Tom Bruhns <tom_bruhns@agilent.com> wrote:
>
>> > > Are you suggesting that such antennas are not linear systems?
>> >
>> > Not at all.
>>
>>
>> Linearity, to me, means that the response of a system (the antenna) to
>> one input (signal) is independent of its response to any other
>signals.
>
> OK, then suppose we illuminate an antenna with a CW EM wave, then
> connect a receiver to detect it. Are you CERTAIN that no other
> EM fields can possibly interfere with this process, yet do so
> entirely by linear effects?

I'm certain that fields (photons) can only be altered due to the
mediation of charged matter. Other fields alone cannot alter them.

> OK, what if I use a second distant transmitter with
> identical frequency? I bet I can create an RF interference
> pattern so that the above receiving antenna is in an antinode,
> and the received power drops essentially to zero. I've done
> it with wave-superposition, which obviously is totally linear.
> This stuff with "energy sucking antennas" uses the same
> process: it uses the superposition of fields of the SAME
> FREQUENCY as the incoming waves. The waves and the antenna's
> field are coherent. If you say that one AC field cannot alter
> under any circumstances, then maybe you've never encountered
> interference patterns.

Interference patterns are simple superposition. The Principle of
Superposition says that the components of a superposition are
unaltered by the superposition. Beyond the superposition zone
we still have the same two waves, still with the same directions
and the same energies as they had before the superposition
occurred.

> Because the AC fields originated by the electrically-short
> antennas have the same frequency as the incoming waves,
> odd things occur which would not occur if the two
> frequencies differed. In particular, if the short antenna

> surrounds itself with a non-radiating local field which
> partially CANCELS OUT the fields of an incoming EM wave,
> then nothing nonlinear has occurred. Yet energy has gone
> missing from space. The cancelled energy ends up within
> the short antenna. Plots of the Poynting vector field show
> that the cancellation process deflects the incoming waves so
> that they flow into the tiny antenna. Their energy appears
> in whatever load is connected.

The energy has *not* "gone missing". That is a misunderstanding
of what has happened. The E fields are vectors, and add vectrorially
at the point of superposition. So if their relative phase is 180 degrees
we have

(+E) + (-E) = 0

But that doesn't mean that energy has gone to zero. Energy
is proprortional to the *square* of E

(+E)^2 + (-E)^2

Squaring E (dot product) yields a positive scalar.
We can write this another way

|P| + |P| = 2P

That holds for any relative phase. Thus energy at the point of
interference is twice that of either component of the superposition
alone. This is always true. No energy goes missing, nor does energy
suddenly appear if the E field vectors happen to be in phase rather
than out of phase.

Diagramatically, if we have two beams of energy 1 that
cross, the situation looks like this

1 1
2
1 1

Now the E vectors may look like this if they're in phase opposition

1 -1
0
-1 1

or they might look like this if they are coincident in phase

1 1
2
1 1

But energy never goes missing. Energy is always a positive
scalar quantity, not a vector.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1690. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-05 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38C34BED.EE3CCFA@eznec.com>
Source record: 62894

"Leland C. Scott" wrote:
>
> "Will Hamelton" <Hamelton@webtv.net> wrote in message
> news:866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net...
> > Yes. I do have 25 watts on ssb.
>
> Then going to 100 watts on SSB will only result in a 6 db increase, 1 "S"
> unit. Its not worth the effort or the money. Almost nobody will even notice
> the difference in signal strength.

This opinion shows up frequently, but not everyone agrees. If you're running sufficient power and conditions are good, it's certainly true. A 6 dB change (from a bit less than one to as many as 3 S-units, depending on what rig you have) won't be noticeable -- the AGC takes up the slack. But when you're operating near the noise level, 6 dB easily makes the difference between solid copy and no copy at all. This is particularly true on the lower frequency bands (40, 80, 160), where there's more noise.

Anyone who thinks 6 dB makes no difference is a fool to buy a beam. After all, the gain of a 3-element beam is about 6 dB relative to a dipole.

Roy Lewallen, W7EL

1691. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8a206g$qg4@nnrp1.farm.idt.net>
Source record: 62745

"Robin G3LBA" <robin@g3lba.freeserve.co.uk> wrote in message
news:8a10o4dks1@news8.svr.pol.co.uk...
> Plotting directly onto Laminate. I am doing this to make prototype PCB
> layouts which I then etch in Ferric Chloride, Is anyone else out there
doing
> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist
etc.

I have a friend who used a "B" sized Roland DXY-1100 flat bed pen plotter. There was just enough room for a 0.064 inch PCB copper clad board to fit under the pen when it was in the up position. The ink pen used was one of those "disposable" black ink oil based pens with a felt tip (0.3mm size). These pens are used to plot on overhead transparencies. The ink resists the Ferric Chloride just fine. When the tip starts to wear out, just throw it out and use a new one out of the sealed bag they come in. These pens were fairly cheap.

When he was done with the copper side he just flipped the board over and plotted the "silk-screen" on the component side of the board.

For double sided boards you can either use a double sided copper clad board (0.064 inch) or use two separate single sided copper clad boards (0.031 inch). For the dual board method drill two pilot holes in each board (on opposite corners if you can) just big enough for a stick pin to fit through it. Use a spray adhesive on the non-copper side of each board and align the two boards using the stick pins. Then carefully press the two boards together. All that's left is to drill the through holes for components and solder wires in the via's to connect the top and bottom traces together.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

1692. Need ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38C48756.76E811F4@clifto.com>
Source record: 62746

What I really need is a DC-to-light spectrum analyzer, but since I'm many dollars away from that I'm going to have to come up with some alternative. I'd like ideas for homebrewing some sort of gizmos to start detecting whatever man-made, NON-QRN interference appears to be around here.

Weird things are happening all over the house, but mostly in the shack-cum-computer-room.

1. GE 900 MHz *spread-spectrum* cordless phone. Ordinarily, it works great; goes a full block easily. At odd times, for periods of one to three hours, something appears to be interfering with it so badly that it needs to be within six inches of the base unit to function; three feet away and it suffers lots of segments of "dead air", i.e. chopping in and out.

2. LG digital cell phone. Works wonderfully everywhere, except at odd times and around the house, especially in the shack. Suddenly for periods of one to three hours, signal strength is nearly nothing, operation is terrible.

3. Ten days ago I bought on clearance a Radio Shack "atomic" clock that sets itself by WWVB. According to its manual it checks the time several times each day. Tonight for the first time it was blinking an indicator that says it had not been able to set itself for the past 48 hours. TEN SECONDS in another part of the house (literally the time it took to walk to the kitchen) was enough to reset it. The unit and its antenna were in the same exact spot for the ten days in which I've owned it. AM reception on my FRG-7, three feet from the clock, shows no QRN-type interference, but all AM stations have a peculiar sound defect similar to what you'd get from a dirty potentiometer; all controls are fine (if there's one thing I *can* do, 33 years after I started working in TV service, it's to clean controls and switches).

4. (Probably incidental; included for completeness.) DSL was installed here January 27. The provider has been able to go to a full megabit for other installations as far as 12,000 line-feet from the DSLAM; I am measured at 4700 feet and can only get 784K. Provider cites strange noise on the lines and expresses surprise that they can't go any faster on that short a line.

5. No CBers in the area; nearest ham is five blocks away and has been for nine years with no problems. Closest likely RF source is a land mobile tower two blocks from here; again, it's been two blocks from me for nine years. Nothing heard through FRG-7, televisions, VCR, stereos (component and handheld), speakers or computer audio. Nothing seems out of the ordinary on the BC700A scanner, but it has enough images to make it nearly useless as a detection tool. Old, cheap diode-and-d'arsonval FSM shows nothing. There are numerous cell towers within a mile, no new ones in the last two

years.

6. There are long periods of impulse QRN in this general area from various sources at various times. There seems to be no relation between that and the problem described above, as there is not always impulse QRN detectable during these times (handheld AM radio used as detector).

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

1693. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8a22b6$qv4@nnrp1.farm.idt.net>
Source record: 62747

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:38C34BED.EE3CCFA@eznec.com...
> "Leland C. Scott" wrote:
> >
> > "Will Hamelton" <Hamelton@webtv.net> wrote in message
> > news:866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net...
> > > Yes. I do have 25 watts on ssb.
> >
> > Then going to 100 watts on SSB will only result in a 6 db increase, 1
"S"
> > unit. Its not worth the effort or the money. Almost nobody will even
notice
> > the difference in signal strength.
>
> This opinion shows up frequently, but not everyone agrees. If you're
> running sufficient power and conditions are good, it's certainly true. A
> 6 dB change (from a bit less than one to as many as 3 S-units, depending
> on what rig you have) won't be noticeable -- the AGC takes up the slack.
> But when you're operating near the noise level, 6 dB easily makes the
> difference between solid copy and no copy at all.

Agreed. I understand the point about working at the noise level. I think the
money and effort would be better spent on reducing feedline losses and
putting up a gain antenna. What's the point of spending money on an
amplifier to burn up 3db, or more, in the feedline/ATU connected to a dipole
hanging from a tree outside and they can hear his signal but he can't hear
theirs?

At least reducing feedline losses and putting up a gain antenna works both
ways. A real worth while exercise if one is working at the noise floor of
the receiver.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex

transmit encryption, receive decryption and error correction
functions."

1694. Re: Fractal antenna for 2 metres?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Piero <carpi@jumpy.it>
Message-ID: <8a2pa3bgd1@serv1.albacom.net>
Source record: 62748

Since I haven't check the validity of your theory (and
practical realizations) yet,
I must suppose you're right. In a short time I will try
to build a two meter band fractal
(I'll waste time, for your enemies) since I'm
interested in small dimension antenna.
You're rigth (from you point of view) to reply to the
numerous attack against you,
but why don't you answer ALSO to Dave? (and to me)
73 de IK2VTJ, Piero.

1695. Re: anemometer kits

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Derek Weston <derekw@alphalink.com.au>
Message-ID: <38C2D084.2C630903@alphalink.com.au>
Source record: 62796

Dennis Edey wrote:
>
> Hello any ideas where you can pick up these wind speed and direction kits ??
> Kind Regards Dennis VK4SX.

http://www.alphalink.com.au/~derekw/ane/anemain.htm

1696. Who asked about 2.3 MHz 50 to 137 ohm matching transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <89uugppjs1@uranium.btinternet.com>
Source record: 62797

I've lost your e-mail address and questions.
Please write again direct.
--
==========
Greetings from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========

1697. Re: Grid current in Linear Amplifier? - Acceptable limit of -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c2efaf.76824028@news.online.no>
Source record: 62798
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment

On Sun, 05 Mar 2000 02:31:51 GMT, "Gary - KJ6Q" <davison7@gte.net>
wrote:

>I would more suspect AB2...
>--
>Gary - KJ6Q
>= = = = = = = =
never mind, and certainly not class C linear amp (as suggested above),
but the original questions still is:

wonder what is acceptable limit of grid current in a 2x 6146B
amplifier?
ALC voltage is often derived from varying grid current over bias
network resistors, usually around 10k resistance. 1mA grid current
will develop 10V voltage drop.

Coupled via a 0.002uF capacitor to a voltage doubling rectifier with
output loaded by 0.1uF (ALC circuit) will maximum give -0.2V
A feasable voltage, the ALC circuit may not have any real function at
all
I modified the FL-dx-500 and received very good reports for improving
readability, but it still seems that few mA grid current is within
acceptable limit of grid current for this sort of amplifier using 2x
6JS6A or 6146B

Seems that for 1000W linears fraction of 1mA grid current is too much
to avoid splatter, so an exciter with 1mA grid current isn't well for
the guy 10kHz up or down....

73 jan-martin
LA8AK

1698. Re: 23 cm. antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c303ec.82006598@news.online.no>
Source record: 62799

On Sun, 5 Mar 2000 21:11:16 +0100, "Hauge" <hauge@CUThrcnet.dk> wrote:

>Hi
>
>Has anybody a good (simple) drawing to build a 23 cm. yagi antenna ?? Maby a
>link to inet, i can't find anything usefull..
>
>Thanks
>/Hauge
>
>
>
have slotted waveguide OZ1UHF, but perhaps not what you expect

1699. Re: 23 cm. antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c3043c.82086647@news.online.no>
Source record: 62800

On Sun, 5 Mar 2000 21:11:16 +0100, "Hauge" <hauge@CUThrcnet.dk> wrote:

>Hi
>
>Has anybody a good (simple) drawing to build a 23 cm. yagi antenna ?? Maby a
>link to inet, i can't find anything usefull..
>
>Thanks
>/Hauge
>
>
>
sri, this is the link http://www.qsl.net/ok1cdj/dubus/index.html

1700. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <j3Fw4.40637$3b6.183294@ozemail.com.au>
Source record: 62801

there are 2 kinds of choke, the swinging kind and the resonant kind. Henry Radio uses the resonant kind. If your AMP is QRO plus use a a resonant choke supply the peak current from your mains is less. This enables you too run a super big tube without to much investment in heavy copper drop leads to your shack. Besides getting high capacity oil capacitors that are true filter caps are both expensive and hard to find, the string of brand new electrolytics are no cheaper. But again we dont know what your voltage and current needs are. If your amp is not table top i would use a resonat choke supply, you can buy a matched choke capacitor pair from Peter Dahl. I built the mother of all power supplies running a resonat choke supply and i can run any tube from 2 8877s to a 4cx10000, the money invested was worth it. I installed it in the roof and i run heavy 50 KV 20 amp wire to amp. I can run all 9 bands at about 2 kw from this single supply. You could never do that with a capacitor filter power supply. Most military amps and broadcast transmitter are running resonant choke supplies
Ron H <rnharsh@visi.com> wrote in message
news:xwzw4.463$F7.11436@ptah.visi.com...
> I am planning a new amp and noticed that most of the newer designs do not
> use inductive chokes in the high voltage supply. Back when I learned about
> such things a filter choke was considered essential for good hum filtering
> with variable (keyed) loads..... What's the story? Should I use a choke
or
> go with the newer design (and cheaper) and use only caps????
>
>
> 73 K3PID rnharsh@visi.com
>
>

1701. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <89vggc$l3q@nnrp2.farm.idt.net>
Source record: 62802

"Will Hamelton" <Hamelton@webtv.net> wrote in message
news:866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net...
> Yes. I do have 25 watts on ssb.

Then going to 100 watts on SSB will only result in a 6 db increase, 1 "S"
unit. Its not worth the effort or the money. Almost nobody will even notice
the difference in signal strength.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

1702. Re: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: oN <NOSPAM@EUNET.YU>
Message-ID: <89vkshkkj1@SOLAIR2.EUnet.yu>
Source record: 62803
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Yes. We need brand new UFO-s!
By the way: Who pays for this sheets: arms, bombs, planes, guns...
Can't we do anything better with all this energy and the money?
&
73

--
All the best,
Proka
YZ7RVZ

Prince of Coyotes <fdecker@catskill.net> wrote in message
sc3po8nqee6147@corp.supernews.com...
Keep them, I understand Yugoslavia (that is, Serbia) needs a new Air Force.
"oN" <NOSPAM@EUNET.YU> wrote in message news:89rkl8mlg1@SOLAIR2.EUnet.yu...
Tjah,
I already have some relay's. If anybody need some parts, come into Surchin (15 Km from
Belgrade) in museum. You can take how many you want,

--
All the best,
Proka
VHF <walkie-talkie@europe.com> wrote in message 895j1e$367$2@SOLAIR2.EUnet.yu...
Make an offer.

http://www.geocities.com/FashionAvenue/Runway/7439/f117.jpg

1703. UV Light Boxes for PCB's ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <89vmb0$n33$1@lola.ctv.es>
Source record: 62804

I am looking for plans for a UV light box for making homebrew PCB's.

If you have any plans or links to WWW pages please reply.

73 de Colin

1704. Re: Non inductive resistors/sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: DETROIT47 <detroit47@mediaone.net>
Message-ID: <38C37E86.9E05EFD5@mediaone.net>
Source record: 62805

Try surplus sales of Nebraska

Matt Erickson wrote:

> Fair radio sales has some, and RF parts too, check their web sites.
>
> wb wrote:
>
> > I am looking for some non inductive resistors of about 100 to 150 watts in
> > 12.5 , 200 and 450 ohm. Can anyone suggest some sources? Dale makes some
> > resistors that are claimed to be non inductive, or close to it, would these
> > be suitable for a grid termination for a tetrode amp?
> >
> > will

1705. fd

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Louis Wildschut <wilde@dds.nl>
Message-ID: <01bf875a$e790dbe0$1701a8c0@louis>
Source record: 62806

df

1706. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: OX3IO <ox3io@vind.gl>
Message-ID: <U4Nw4.92$Ow4.99@news.get2net.dk>
Source record: 62807
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

It is possible to find the datasheet for the NE602 at Philips - they are just naming it SA602.

73 de OX3IO, Brian

n8tgc <nospam_arnaut@prodigy.net> wrote in message news:89rklu$a45g$1@newssvr03-int.news.prodigy.com...
> Does anyone have a datafile or specsheet on the NE602 mixer IC? I am
> working on a couple of projects where the 602 would work great, I just need
> a bit more info.
>
> If you can lend a hand..Thanks!
>
>
> 73
> N8TGC
>
>
>

1707. PSK31 hookup ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38C3A65E.8B4A64CB@ica.net>
Source record: 62808

Does it matter what side (stereo left/right) of the computer sound card
is connected
to the mic and speaker audio ports of the radio ?
I'll be using Digipan.

Please reply by email: hduff@ica.net

Thanks de VA3TO

1708. 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Ralph Blach <rcblach@raleigh.ibm.com>
Message-ID: <38C3ABAC.DFB89A63@raleigh.ibm.com>
Source record: 62809

Does anybody know where I can purchase 12 gage enamel covered wire?
I need it for a magnet project.

Thanks

Chip

1709. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38C3B7E0.7DC8F7DD@sympatico.ca>
Source record: 62810
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

n8tgc wrote:

> Yea, I already thought of that. However the NE602 is NOT a Phillips
> manufactured chip. Therefore they only have a collection of application
> notes. They do not have a complete specsheet on the device.

http://www.semiconductors.com/pip/NE602AD

Looks like a spec sheet to me.

The "Order now" links are often amusing - you can buy as many as
you like, as long as you buy them 550 at a time. :-)
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

1710. Re: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Peter Gottlieb <peter@NewYorkNERD.com>
Message-ID: <eU4VJJ3h$GA.220@cpmsnbbsa05>
Source record: 62811
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

Who do you think pays for it? It is efficiently taken out of our paychecks
and we have little to say about it.

But it is a complex issue - each side has perfectly valid points so I'm not
exactly sure how to change things without causing a worse problem.

oN <NOSPAM@EUNET.YU> wrote in message news:89vkshkkj1@SOLAIR2.EUnet.yu...
Yes. We need brand new UFO-s!
By the way: Who pays for this sheets: arms, bombs, planes, guns...
Can't we do anything better with all this energy and the money?
&
73

--
All the best,
Proka
YZ7RVZ

1711. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Ralph Blach <rcblach@raleigh.ibm.com>
Message-ID: <38C3BADD.429EF812@raleigh.ibm.com>
Source record: 62812

Ralph Blach wrote:
>
> Does anybody know where I can purchase 12 gage enamel covered wire?
> I need it for a magnet project.
>
> Thanks
>
> Chip

I live in Chapel Hill, NC and I need about 200 feet, I think.

What I want to do is wrap this wire around a pvc pipe and show how large
currents can be generated
when I drop on of edmonds Scientifics NIB magnets down it.

thanks

Chip

1712. Re: 23 cm. antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Brent Walton <kf6fgb@pacbell.net>
Message-ID: <38C3BD48.C5E4EF4B@pacbell.net>
Source record: 62813

1255 MHz Yagi

Hauge wrote:

> Hi
>
> Has anybody a good (simple) drawing to build a 23 cm. yagi antenna ?? Maby a
> link to inet, i can't find anything usefull..
>
> Thanks
> /Hauge

1713. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38C3C3DA.364C2917@mmm.com>
Source record: 62814
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> This is an analogy for the "energy-sucking antenna",
> where a large e-field produced by the antenna can
> cause it to receive more signal power from the incoming
> EM waves.

I've probably missed 95% of the postings on this thread.

If I take a transmitter far away and near by I have a
spherical volume and two cases:
1. the volume is empty
2. the volume contains a load and a dipole cut to
the frequency of the far away transmitter

I then compute the surface integral of the Poynting
vector over those spherical surfaces I will find
that in case 1, no power is absorbed and in case 2,
some power is absorbed. I will also find that
the em fields on those two surfaces are different
and I will find that the differences are entirely
attributable to the motions of charges in the load
and dipole. This is all true. A similar situation
exists regarding the secondary of an ordinary transformer.

Its the "more" in the quoted paragraph that I question.

Opinions expressed herein are my own and may not represent those of my employer.

1714. Re: WIFB Article on QRP Transmitters and 2N2222's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: ns.ve1jfa@rac.ca
Message-ID: <ns.ve1jfa-0603001036380001@ts1-d29.mby.auracom.com>
Source record: 62815

In article <ucPv4.720$D7.13383@news.itd.umich.edu>, "Curtis Scholl"
<cscholl@izzy.net> wrote:

> I hope I can get someone with back issues of QST to help here. Around
> 80/81 W1FB, Doug DeMaw,
> wrote some QRP Xmitter articles with schematics. The particular article I am
> looking for
> was a revisit and modification of an earlier project related article. I had
> a copy of the article and have misplaced/lost it.
>

Curtis,

Doug, W1FB, wrote a similar article for the Dec 1994 CQ magazine. It shows
how to construct a transmitter in stages. At the completion of each stage
you have a working transmitter. Subsequent stages add function. One stage
adds a 3 x 2N2222 rf amp. He says they boost the power to 1 watt.

--
Jeff (VE1JFA)

To reply, remove "ns." from my email address.

1715. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Dan K Nelson <w6dkn@qsl.net>
Message-ID: <ePPw4.170$DB1.48217@dfiatx1-snr1.gtei.net>
Source record: 62816

Roy Lewallen <w7el@eznec.com> wrote in message
news:38C34BED.EE3CCFA@eznec.com...
> "Leland C. Scott" wrote:
> >
> > "Will Hamelton" <Hamelton@webtv.net> wrote in message
> > news:866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net...
> > > Yes. I do have 25 watts on ssb.
> >
> > Then going to 100 watts on SSB will only result in a 6 db increase, 1
"S"
> > unit. Its not worth the effort or the money. Almost nobody will even
notice
> > the difference in signal strength.
>
> This opinion shows up frequently, but not everyone agrees. If you're
> running sufficient power and conditions are good, it's certainly true. A
> 6 dB change (from a bit less than one to as many as 3 S-units, depending
> on what rig you have) won't be noticeable -- the AGC takes up the slack.
> But when you're operating near the noise level, 6 dB easily makes the
> difference between solid copy and no copy at all. This is particularly
> true on the lower frequency bands (40, 80, 160), where there's more
> noise.
>
> Anyone who thinks 6 dB makes no difference is a fool to buy a beam.
> After all, the gain of a 3-element beam is about 6 dB relative to a
> dipole.
>
> Roy Lewallen, W7EL

Very true, but the big difference with the antenna is that it's a two way
street, the gain applies to both transmit as well as receive. IMHO, this is
much more beneficial than just adding a few more watts ...

73 de W6DKN

1716. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Bill Turner, W7TI" <w7ti@jps.net>
Message-ID: <aci7csk521dbqgbuvp218lp5tppsqo06sn@4ax.com>
Source record: 62817

"Leland C. Scott" <no-spam@junk-mail.net> wrote:

>
>"Will Hamelton" <Hamelton@webtv.net> wrote in message
>news:866-38C2AE9D-34@storefull-121.iap.bryant.webtv.net...
>> Yes. I do have 25 watts on ssb.
>
>Then going to 100 watts on SSB will only result in a 6 db increase, 1 "S"
>unit. Its not worth the effort or the money. Almost nobody will even notice
>the difference in signal strength.

Leland, with all due respect, I have to disagree. Anyone who works
weak-signal DX will tell you that 6db is often the difference between
qso and no qso. Hams spend hundreds of dollars for antennas which
give them a few db more, and for good reason. True, when the signal
is 20 over 9, then 6db is not noticeable, but not when it's in the
noise.

Bill, W7TI

1717. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a10de$66r$1@nnrp1.deja.com>
Source record: 62818
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <nts5cs8376940atptb0b28euds6decgfbh@4ax.com>,
Boris Mohar <borism@interlog.com> wrote:

> This is in contradiction with your statement about dozen lines up:
>
> >> > the higher you let the capacitor voltage rise, the higher grows
the energy
> >> > flow into the capacitor.

Have you tried plotting this curve? I ask because you
seem to be attacking what I say, and if you actually try
messing with a simulation of this triviall circuit ,
you'll instantly answer these questions.

It's not a contradiction: when the capacitor's voltage
is very small, the capacitor's incoming energy-flow
grows linearly, and also its voltage grows linearly. When
the voltage BECOMES LARGE RELATIVE TO THE POWER SUPPLY
VOLTAGE, this no longer holds true.

In the analogy with the electrically-short resonant
antenna, things work in similar fashion: the rising
antenna voltage can only act to "draw in" extra energy
when the field strength at a quarter-wavelength away
from the antenna is very small when compared to the
amplitude of the incoming EM waves. The incoming EM
waves are analogous to the power supply which drives
the capacitor above. When the voltage on the resonant
antenna grows very large, it stops "drawing in" extra
energy-flow in proportion to voltage.

> > (The peak power is when the V/I of the capacitor is
> > 100K ohms, which gives an impedance match for
> > an instant.)
>
> Impedance match? Of what to what?

Instantaneous impedance match, not just impedance match.
The instantaneous impedance match of the capacitor's V/I
at one instant, to the 100K resistor that's in series with
the power supply. In other words, as the V and I in the
capacitor are changing, at one instant the capacitor's V
divided by the I will be 100,000. That's also the instant
when the rate of energy flowing into the capacitor is
maximum. If we imagine a capacitor to be like a resistor

which changes its resistance over time, then when the
capacitor's "resistance" is 100K, the capacitor is absorbing
energy at a maximum rate.

> > This is an analogy for the "energy-sucking antenna",
> > where a large e-field produced by the antenna can
> > cause it to receive more signal power from the incoming
> > EM waves. As with the capacitor, the LC resonant
> > antenna will create stronger local fields as its stored
> > energy ramps up, and this increases the absorbed
> > power, but since this is a 2-dimensional situation
> > (rather than the 1-D of the capacitor), I think
> > it means that the received power will rise exponentially
> > whenever an EM wavetrain first hits the tiny antenna-
> > resonator.
>
> I cannot see how you can compare the DC transient conditions of a
simple RC
> circuit with the AC dynamics of an resonant circuit.

I was using this capacitor-analogy because an earlier posting
claimed (though not in these exact words) that there was no
situation where the fields associated with an electronic
component could affect the energy flowing into that component.
Capacitors do it. But this is only an analogy, not a proof
that resonant small antennas do the same. The whole point
of an analogy is an aid to understanding, and is not a proof.
How can I compare the two? BY ANALOGY! The capacitor is
sort of like a "low frequency case" of the way fields can
alter energy flow.

> Antennas cannot store
> energy.

ANTENNAS CANNOT STORE ENERGY????? Please recall that we
are discussing LC circuits which are being used as antennas.
That's what I mean when I say "small resonant antenna".
LC circuits don't store energy?

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1718. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a11mg$7cc$1@nnrp1.deja.com>
Source record: 62819
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38C3C3DA.364C2917@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:
> Science Hobbyist wrote:
>
> > This is an analogy for the "energy-sucking antenna",
> > where a large e-field produced by the antenna can
> > cause it to receive more signal power from the incoming
> > EM waves.
>
> I've probably missed 95% of the postings on this thread.

The critical part is that the antennas I'm discussing
are electrically short, and are connected to a tank
circuit which is tuned to resonance with the incoming
waves.

> If I take a transmitter far away and near by I have a
> spherical volume and two cases:
> 1. the volume is empty
> 2. the volume contains a load and a dipole cut to
> the frequency of the far away transmitter
>
> I then compute the surface integral of the Poynting
> vector over those spherical surfaces I will find
> that in case 1, no power is absorbed and in case 2,
> some power is absorbed. I will also find that
> the em fields on those two surfaces are different
> and I will find that the differences are entirely
> attributable to the motions of charges in the load
> and dipole. This is all true. A similar situation
> exists regarding the secondary of an ordinary transformer.

Agreed.

> Its the "more" in the quoted paragraph that I question.

Yes, that's the key question: does connecting a tank
circuit to a short dipole (or small loop) cause it to
absorb MORE energy from the incoming waves? More
specifically, if we connect just a resistive load to
a short dipole and adjust that resistor for maximum
received power, can we receive even MORE power if we
then connect a lossless tank circuit across that dipole,
then re-adjust that resistor value for maximum power?
These papers imply that the answer is yes:

C. F. Bohren, "How can a particle absorb more than the light incident on it?", Am J Phys, 51 #4, pp323 Apr 1983

H. Paul and R. Fischer "Light Absorbtion by a dipole", SOV. PHYS. USP.,
26(10) Oct. 1983 pp 923-926

These papers look at the absorbtion of em waves by electrically small particles (both metal particles and dielectric.) They show that whenever there is a resonator onboard a particle, it creates a very strong local field, and since this field is synchronized to the incoming em waves, it distorts them in such a way as to make them deflect towards the particle. The particle ends up absorbing more energy than if the resonator was not present. In other words, the "effective area" of a small particle becomes enlarged when there is a resonator present.

Very strange, no? The upshot: a 1-angstrom atom can easily absorb 6000-angstrom red light waves if that atom behaves as an LC resonant antenna at that frequency. I had previously imagined that tiny atoms absorb long light waves because the light is "really" photons. This turns out to be wrong. From a wave-oriented viewpoint, atoms can absorb energy of huge wavelength because an atom is like a tank circuit, and it can generate an intense AC field in its nearfield region.

Also, it explains why the loopstick in an AM radio works so well. That loopstick has a tuning capacitor, and if this "energy sucking" effect is real, then the effective area of the tiny loopstick antenna becomes much larger when it's tuned to resonance.

I'd always assumed that the capacitor on an AM radio loopstick was only there to form a bandpass circuit which rejects off-freq stations. Imagine my suprise when I read those two physics papers above. They imply that AM loopstick antennas contain some very interesting physics. Just imagine: we can vary the electrical size of a small antenna by altering the circuitry to which it connects. It's as if the tiny antenna can throw up a "virtual lens" made out of vibrating EM fields. Is any of this stuff useful? Who knows! At least for me it's a new toy for my brain to futz with.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1719. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Geoffrey G. Rochat" <geoff@pkworks.com>
Message-ID: <8a0mf2$l38$1@news.kersur.net>
Source record: 62820
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

Phillips has dropped the NE602 in favor of the SA602A, which is an
industrial-grade version of exactly the same thing. Take a look at
www.semiconductors.com/handbook/chapter_221.html.

n8tgc wrote in message <89u1sh$12fk$1@newssvr04-int.news.prodigy.com>...
>
>Yea, I already thought of that. However the NE602 is NOT a Phillips
>manufactured chip. Therefore they only have a collection of application
>notes. They do not have a complete specsheet on the device.
>
>N8TGC
>
>
>>Every semiconductor manufacturer has had all this stuff on line for
>>ages.
>>Do a search at http://www.semiconductors.philips.com
>>--
>>Laura Halliday VA3LDH "Laisse le vent tout emporter..."
>>Grid: FN03gs - Foly/Viennet
>
>

1720. Re: ==)> F-117 NIGHTHAWK Stealth Fighter - parts - UNIQUE <(==

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: William Blair <wbblair@att.net>
Message-ID: <nkn7cs0s7rt2sp18pf2ho8503cefpk1o7l@4ax.com>
Source record: 62821
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,be.forsale

On Mon, 6 Mar 2000 08:47:02 -0500, "Peter Gottlieb"
<peter@NewYorkNERD.com> wrote:

>Who do you think pays for it? It is efficiently taken out of our paychecks
>and we have little to say about it.
>
>But it is a complex issue - each side has perfectly valid points so I'm not
>exactly sure how to change things without causing a worse problem.

Complex issue it is and we were stupid to get involved. It's in
Europe's back yard and it's time for them to start paying for their
own defense. They've been dependent upon us since WWII. They've
fully recovered now, so it's time for them to start paying their own
way both in money and lives. Excellent article at:

http://csf.colorado.edu/forums/isafp/99/msg00056.html

>oN <NOSPAM@EUNET.YU> wrote in message news:89vkshkkj1@SOLAIR2.EUnet.yu...
>Yes. We need brand new UFO-s!
>By the way: Who pays for this sheets: arms, bombs, planes, guns...
>Can't we do anything better with all this energy and the money?
>&
>73

1721. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c304d8.82242505@news.online.no>
Source record: 62822

On Sun, 5 Mar 2000 14:34:05 -0600, "Ron H" <rnharsh@visi.com> wrote:

>I am planning a new amp and noticed that most of the newer designs do not
>use inductive chokes in the high voltage supply. Back when I learned about
>such things a filter choke was considered essential for good hum filtering
>with variable (keyed) loads..... What's the story? Should I use a choke or
>go with the newer design (and cheaper) and use only caps????
>
>
>73 K3PID rnharsh@visi.com
>
>
depends on which power supply efficiency you want, with a smaller
choke it is possible to reduce current loss of transformer

JM
LA8AK

1722. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: rcnixon@mindspring.com
Message-ID: <38c3e195.903831@news.mindspring.com>
Source record: 62823

Chip, is that you? There is a web wire supplier at www.wiretron.com.
You could also use bare 12ga with some space between the windings.
Nah, you are using ~200 feet. How about insulated wire from Home
Depot/Lowes? Will the insulation matter that much? If so, try
wiretron.

Russ Nixon - KF4WXD

Ralph Blach <rcblach@raleigh.ibm.com> wrote:

>Ralph Blach wrote:
>>
>> Does anybody know where I can purchase 12 gage enamel covered wire?
>> I need it for a magnet project.
>>
>> Thanks
>>
>> Chip
>
>I live in Chapel Hill, NC and I need about 200 feet, I think.
>
>What I want to do is wrap this wire around a pvc pipe and show how large
>currents can be generated
>when I drop on of edmonds Scientifics NIB magnets down it.
>
>thanks
>
>Chip

1723. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8a0ngaptl1@campus3.mtu.edu>
Source record: 62824
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In rec.radio.amateur.homebrew A. Scott Chesnick <chesnics@fido.nhlbi.nih.gov> wrote:
> Quoting from the Proton magnetometer Web
> Pagehttp://hometown.aol.com/alka1/ProMag.html

> "In the northern latitudes of the U.S. the total magnetic field strength is in the
> order of 50,000 to 55,000 nanoTesla and varies from location to location. Short
> period variations due to magnetic storms may reach several hundred nanoTesla.
> Diurnal variations caused by solar induced ionospheric currents are in the order of
> tens of nanoTesla. Presently, the long term trend of the total field is in the order
> of minus 90 nanoTesla per year (steadily decreasing).

--> Huh. Does this mean we can expect a magnetic field reversal in about
600 years?

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Infinite perversity and genius are often indistinguishable."
-- Thomas Scoville

1724. Re: Power Supply Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8a0mpliqk1@ausnews.austin.ibm.com>
Source record: 62825

In <20000303022902.00510.00004170@ng-de1.aol.com>, hamm4fun@aol.com (Hamm4fun) writes:
>I came across 4 Switching type power supplies rated at 15v 150 Amp each.
>Trouble is the power input to them is 3 phase. The input is a three phase
>rectifier and filter. The filter caps are a couple of big computer grade jobs
>rated at 200VDC. Looks like this should develope about 150VDC to supply to the
>inverter section of the power supply. I want to run this off of single phase
>power, any suggestions on how to do this would be appreciated. I was
>considering buiding an external 150vdc supply and connecting it to all three
>phases.

You'd probably be better off scrapping the supplies and considering another option for producing the 15 volts you need. Or, the other option would be to install a motor-generator (alternator) set, with the alternator portion having a three phase output to drive the supplies (Or, for that matter, have the alternator supply 10.6 volts at three phase, and rectify and filter that.).

Or, you might be able to increase the filter capacitor size by a couple of orders of magnitude (Yes, a couple of orders of magnitude, not a couple of times.).

The problem is that a three phase full wave rectifier produces a very smooth output. With a three phase power source, there are three waves, each offset by 120 degrees from each other. The full wave rectifier effectively changes this to six waves each offset by 60 degrees from each other. Thus, the output from the rectifier is composed of the 60 degrees from each wave where it's the maximum. This is 30 degrees either side of the peak. Thus, the output from the rectifier starts at .866 (Cosine(30)=.866) times the peak line voltage, goes up to the peak line voltage, and then drops back down to 866 the peak line voltage. At this point, the next diode in the rectifier starts conducting for the next wave, and the process repeats. Thus, the output from the rectifier fluctuates between .866 times the peak and the peak line voltage. Therefore, there's very little filtration that needs to be performed by a capacitor.

Now, if you consider the case of a single phase full wave rectifier, the output starts at zero, goes to the peak line voltage, and then back to zero, at which time the other diode starts conducting and the process repeats. However, because the voltage swings are much deeper (all the way down to zero), and because the voltage pulses are farther apart (180 degrees, rather than 60 degrees), the capacitor used to filter the output must be significantly larger. After all, the capacitor has to supply the entire energy for the switching power supply while the input voltage is below the level necessary to run the switcher.

The net results is that a three phase, full-wave power supply needs almost no filtering by capacitors, while a single phase power supply needs extensive filtering.

It might be possible to feed single phase power into the power supply, but you would have to significantly increase the size of the filter capacitor bank. You'd then have to worry about things like surge current limits on the diodes, and if a single diode (diode pair?) would be rated for the worst case current consumption by the supply (In the three phase case, each diode only conducts for a much smaller portion of the cycle.).

So, the net result is that while you might be able to get them to work if you throw enough knowledge and capacitors at them, it may be simpler to build a supply for what you need rather than converting them.

If you do decide to persue your approach, then remember that your supply has to supply a LOT of current at 150 volts. The power out from the switching supply is 15V*150A=2250W. If you assume 100 percent efficiency (which we all know can't be achieved), the current required from the input would be 2250W/150V=15.4A. Thus, if you factor in a resonable efficiency, and account for startup surges, peaks, etc., you'll probably need to supply somewhere around 20-30 amps at 150 volts.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

P.P.S. Nothing in this post should be considered authorotative. Any and all facts and designs should be checked before use; errors may be present.

1725. L.O.S.A Contribution Form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: cjX@hth.com
Message-ID: <38c3bee7.84916896@news.sverige.net>
Source record: 62826
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

```
List Of Stamp Applications (L.O.S.A for short)
==============================================

If you have done something (big or small) with the BASIC Stamp
that you are willing to tell others please use the form below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Then e-mail the form to:

cj@hth.com

With the following as the subject:

L.O.S.A Contribution

Or you could point your Web-browser to the following URL and fill
in the L.O.S.A form on the Web-page...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###

http://www.hth.com/losa/

The latest version of L.O.S.A is always available at the above
mentioned both in ASCII and in ZIP-file format for easy download.
An index of L.O.S.A is posted to the following mailing lists and
news groups, I will update it approx. once a month.

Mailing lists:

BASIC Stamp Mailing List

News groups:

comp.robotics.misc
comp.home.automation
sci.electronics
sci.electronics.misc
rec.radio.amateur.homebrew

FTP-site:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

You can also find the latest version on the following URL...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###
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http://www.hth.com/losa/

[--- cut ---]

```
=========================================================================
- L.O.S.A Contribution Form -
=========================================================================
New Contribution [ ] Update [ ]
-------------------------------------------------------------------------

Title :
Author: Date:

E-mail: (optional)
-------------------------------------------------------------------------

Stamp model : BASIC Stamp/BS1-IC/BS2-IC/BS2SX-IC
Code available: YES/NO
Filename : (optional)
URL : (optional)
-------------------------------------------------------------------------
Description : (5-50 rows describing your application)

=========================================================================
```

[--- cut ---]

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

```
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
```

1726. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8a0rff$8i4$1@neptunium.btinternet.com>
Source record: 62827

If you have an electric motor or transformer re-wind business within striking distance you will probably find them helpul and cheap. They often have half empty reels which eventually end up on the scrap metal heap.

If you have a pretty wife or 18 year old daughter she will probably collect some free.
--
==========
Greetings from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
Ralph Blach <rcblach@raleigh.ibm.com> wrote in message news:38C3ABAC.DFB89A63@raleigh.ibm.com...
> Does anybody know where I can purchase 12 gage enamel covered wire?
> I need it for a magnet project.
>
> Thanks
>
> Chip

1727. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8c7ssf.jbk.root@radioactivex.lebesque-al.net>
Source record: 62828
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>On Sat, 04 Mar 2000 00:26:02 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

>I'm certain that fields (photons) can only be altered due to the
>mediation of charged matter. Other fields alone cannot alter them.

Yes, but it seems the statement needs to be repeated, and often.
So continue to throw it in, prn.

>Interference patterns are simple superposition. The Principle of
>Superposition says that the components of a superposition are
>*unaltered* by the superposition. Beyond the superposition zone
>we still have the same two waves, still with the same directions
>and the same energies as they had before the superposition
>occurred.
>

Here is a source of some confusion. The individual fields are unaltered,
but you only measure them through the effect that the SUM has on your
instrument...

>
>(+E) + (-E) = 0
>
>But that doesn't mean that energy has gone to zero. Energy
>is proprortional to the *square* of E
>
> (+E)^2 + (-E)^2
>

You have to get the same result that you got by adding the fields
and then squaring the total. You get the result by remebering
that your square is an inner product. For a phase which isn't
constant in time, the inner product is 0.

1728. tube data wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000306130541.16085.00002512@ng-fc1.aol.com>
Source record: 62829

I have an old military transceiver model BC 222..it uses a VT67 and a VT 33 tube.I need to know the generic type tube that would replace them also any other tube data such as fil V and C ...thanks Harold W4PQW

1729. Re: RF gain

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Roland Burgan <rburgan@up.net>
Message-ID: <38C3F6C1.66B825F6@up.net>
Source record: 62830

This may also be done using Output & Input Voltages...

db= 20 * log(base 10) Vout/Vin

"Al, N2NKB" wrote:

> Thomas C. Sefranek wrote in message <38C19612.1E82CB2C@cmcorp.com>...
> >
> >
> >Will Hamelton wrote:
> >
> >> I have a AM FM antenna amp with 22 db.
> >> What is the formula for arriving at 22db if there is one?
> >> 73,
> >> Will
> >
> >It's a measure of the ratio of power in to power out. (Gain)
> >
> >--
> > *
> > | __O Thomas C. Sefranek tcs@cmcorp.com
> > |_-\<,_ Amateur Radio Operator: WA1RHP
> > (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
> >
> >http://hamradio.cmcorp.com/inventory/Inventory.html
> >http://www.harvardrepeater.org
> >
>
> The gain in dB is 10 * log base 10 (Pout/Pin.)
> Or vica versa,
> Solve for linear: Gain= 10^ (dB/10)
>
> dB to linear: 10^(22/10)= 158.5
>
> linear to dB: 10 * log 158.5 = 22 dB.
>
> So if 1 mW of power was at the amplifier's input, the output would have 158.5 mW.
> 0 dBm 22.0 dBm.
> Al

1730. Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a10o4dks1@news8.svr.pol.co.uk>
Source record: 62831

Plotting directly onto Laminate. I am doing this to make prototype PCB layouts which I then etch in Ferric Chloride, Is anyone else out there doing the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.

73 Robin G3LBA

1731. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38C40E4C.3ECF527E@clifto.com>
Source record: 62832
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

Mark Zenier wrote:
> Yes it it. Signetics has been owed by Philips since the early 1970's.

Apparently not: <http://www.signetics.com/doc/history.html>

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

1732. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38C40F5D.61F3D8FA@clifto.com>
Source record: 62833

Bill Turner, W7TI wrote:
> Leland, with all due respect, I have to disagree. Anyone who works
> weak-signal DX will tell you that 6db is often the difference between
> qso and no qso. Hams spend hundreds of dollars for antennas which
> give them a few db more, and for good reason. True, when the signal
> is 20 over 9, then 6db is not noticeable, but not when it's in the
> noise.

Every little thing helps. My first Italy QSO was just after I finished
building a Knight speech compressor; I was weak but 100% readable, but
when I shut down the compressor for comparison, he couldn't hear me at
all.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

1733. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <SCUw4.77107$Cn1.1694125@news5.giganews.com>
Source record: 62834

There's the technique of ironing on the graphic design from regular laser or copy machine paper. Make sure your board is clean, then with a warm to medium heat, (the type of iron used to iron clothes) firmly press from the non-ink side of the paper onto the board. I've used this method to transfer graphics onto painted surfaces as well.

73 de Jack

Robin G3LBA wrote in message <8a10o4dks1@news8.svr.pol.co.uk>...
>Plotting directly onto Laminate. I am doing this to make prototype PCB
>layouts which I then etch in Ferric Chloride, Is anyone else out there
doing
>the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist
etc.
>
>73 Robin G3LBA
>
>

1734. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <8a15qdmch2@SOLAIR2.EUnet.yu>
Source record: 62835
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1735. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38C4293B.C55957B4@mmm.com>
Source record: 62836
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:
> if we connect just a resistive load to
> a short dipole and adjust that resistor for maximum
> received power, can we receive even MORE power if we
> then connect a lossless tank circuit across that dipole,
> then re-adjust that resistor value for maximum power?

A short dipole presents a mainly capacitive (plus some
resistance) impedance to its load. So in case 1,
I get to optimize only the source resistance, and
in case 2 I get to optimize the source resistance
and throw in a parallel R and C?

It look like a no brainer. Case 2. If the
source is capacitive, let the load be inductive.

I'd look at it from a load matching point of view.

It might be easier to understand with a series L
rather than a shunt L. I think this is the same
concept as base loading the antenna.

Opinions expressed herein are my own and may not represent those of my employer.

1736. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: jeixray@aol.com
Message-ID: <20000306173600.02508.00000829@ng-cf1.aol.com>
Source record: 62837

I always go to my local motor repair shop. They purchase wire in 25 lb spools, they can reel off as much as you want. They normally sell it by the pound.
jim
wa2njv

1737. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a1dgsglc1@nnrp1.deja.com>
Source record: 62838
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <2SLDOA06BxInEyIe8j22pv4W+kcV@4ax.com>,
Gary Coffman <ke4zv@bellsouth.net> wrote:

> > OK, then suppose we illuminate an antenna with a CW EM wave, then
> > connect a receiver to detect it. Are you CERTAIN that no other
> > EM fields can possibly interfere with this process, yet do so
> > entirely by linear effects?
>
> I'm certain that fields (photons) can only be altered due to the
> mediation of charged matter. Other fields alone cannot alter them.

Then we're in agreement, I think. When a normal 1/2-wave
dipole antenna absorbs energy from incoming EM waves, it
is the charged matter within the metal which causes the
antenna to grab energy from the EM waves. However,
pointlike particles don't magically interact with EM
waves, instead it is their surrounding fields which
perform the trick. Regardless of the type of antenna,
it is the LOCAL FIELDS associated with the charges
which interact with the EM waves and cause the energy
to eventually wind up flowing along the antenna's
lead-in cable.

That's why I keep saying that the FIELDS of the electrically
short antenna are reaching out and grabbing EM waves. The
fields of the electrically short antennas are created by
the motions of charged matter within those antennas. By
superposing with the fields of the incoming EM waves,
the antenna's local fields cause enery to be diverted from
the wave. I certainly agree that fields alone
(meaning propagating EM waves far from any matter) cannot
affect other propagating waves in this fashion.

> Interference patterns are simple superposition. The Principle of
> Superposition says that the components of a superposition are
> *unaltered* by the superposition. Beyond the superposition zone
> we still have the same two waves, still with the same directions
> and the same energies as they had before the superposition
> occurred.

True for propagating waves, but not true for the fields in
the nearfield zone of a piece of charged matter such as an
antenna. When a half-wave dipole generates a local field,
the end result is that some of the energy in the incoming
EM waves is intercepted by the antenna. Superposition

still holds true, yet that half-wave dipole was able
to punch a hole in the wavetrain of EM waves passing by.
Do you object to this? If not, then why are electrically
small resonant antennas (with their huge local fields)
such a problem?

I think you might want to review your concepts, since
the idea that "fields allow antennas to intercept EM
waves" applies to all antennas, not just to these
weird resonant antennas.

And make no mistake, the charges are required as
well. You cannot create a dipole field without charges,
and it is the oscillating dipole field and its associated
charges in the conductors which performs the absorbtion
process in both a 1/2-wave dipole and in a tiny resonant
antenna.

> > In particular, if the short antenna
> > surrounds itself with a non-radiating local field which
> > partially CANCELS OUT the fields of an incoming EM wave,
> > then nothing nonlinear has occurred. Yet energy has gone
> > missing from space. The cancelled energy ends up within
> > the short antenna. Plots of the Poynting vector field show
> > that the cancellation process deflects the incoming waves so
> > that they flow into the tiny antenna. Their energy appears
> > in whatever load is connected.
>
> The energy has *not* "gone missing".

Gone missing FROM SPACE, from the travelling EM wave. The
energy is now inside the load resistor connected to the
antenna. This is true of a half-wave dipole, and just as
true of a tiny resonant antenna.

> That is a misunderstanding of what has happened.

I think not. I think I'm unable to get my ideas across
clearly. Also it might be because I'm coming from an
unconventional viewpoint; thinking in terms of the
local fields generated by an antenna rather than in terms
of current through it or voltage across it. I hadn't
realized this was unconventional, but people here are
attacking some concepts which I didn't think were
controversial or even open to debate.

If you are certain that a normal half-wave dipole can
intercept EM waves without the dipole generating fields
of its own, then we have a serious problem. If you
accept the existence of these local fields generated by
the antenna, but are certain that they play no role in
the interception of the energy from the EM waves, then we

have a serious problem. You're no longer arguing about
the tiny antennas, but instead have begun questioning
antenna-physics itself.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1738. Re: << GERMAN TEEN Amateurs >>> 6762

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: j999w@aol.com
Message-ID: <20000306180143.02755.00000390@ng-fx1.aol.com>
Source record: 62839

<24h LIVE Video Chat with young German Amateurs here:>

No thanks, I find lots of young German amateurs in the morning on 10m cw !

1739. Re: tube data wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <38C439F3.6D39383@carroll.com>
Source record: 62840

VT-33 is equivalent to US commercial type 33 or British CV949
VT-67 is equivalent to US commercial type 30 or British CV604

Bob Weiss N2IXK

W4pqw HS wrote:

> I have an old military transceiver model BC 222..it uses a VT67 and a VT 33
> tube.I need to know the generic type tube that would replace them also any
> other tube data such as fil V and C ...thanks Harold W4PQW

1740. Re: Iambic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <38c45a55@news.in-tch.com>
Source record: 62841

Check out the "Simple CMOS Keyer" in the ARRL Handbook. I built one back in the early 90's, worked great. I am not sure if it is still in the handbook, but it was in the 1990 and 1993 handbooks.

Good luck.
73 DE AA7YQ

maddog@io.com wrote in message <38c09868.146244632@news.io.com>...
>On Wed, 01 Mar 2000 16:17:27 GMT, "robert leavitt"
><leavittkid@mediaone.net> wrote:
>
>>I am looking for instructions for building a non PIC electronic iambic
>>keyer.
>
>Drew, if you're interested in building something out of CMOS
>discretes, look at my site for a project I think you'll like:
>
>http://www.io.com/~maddog/hamradio/index.html
>
>73,
>monty N5FC
>
>

1741. Old 50's surplus radar chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Robert Mozeleski <moz@ncx.com>
Message-ID: <A826E934D8D8B51C.E58EA5DF96D23850.AA44CD1ADFE8049D@lp.airnews.net>
Source record: 62842

Hello group..want to show a few pictures of what i am stripping out of these old radar chassis.Got about 20 of these down my dads basement. 1950's.. BC-1268?(forget the correct number at the moment) radar control consoles.Bunch of oil capacitors, http://www.ezaccess.net/moz/DCP00681.jpg And the thing here that is kind of a mystery, http://www.ezaccess.net/moz/DCP00682.jpg Has markings on it that read,THE MUTTER CO., TYPE 433-AC, OHMS 10,000, and the counter has VEEDER-ROOT INC. HARTFORD CONN. Seems was some kind of giant rehostat, and it is geared down pretty good. The front was marked range control. Think i might be able to use this for some type of receive antenna tuner project? Thanks..Bob

1742. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38C469F2.73C51A4@valley.net>
Source record: 62843

Robin G3LBA wrote:

> Plotting directly onto Laminate. I am doing this to make prototype PCB
> layouts which I then etch in Ferric Chloride, Is anyone else out there doing
> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>
> 73 Robin G3LBA

Hello--
I recall seeing a thread on this topic some time ago-- for best results, one would need
a waterproof ink that wets copper but withstands resist. The only flavor of plotter-pen
ink I could locate contained toxic ingredients and was no longer sold in the U.S. Shortly
after, we visited Toronto, and I called a bunch of graphics-supply houses, only to find
that no one in Canada sold the ink, either. Maybe it's availabe in the U.K.?

Problem 2: attaching the PC board to the plotter-- one might try double-sided stick tape
and a sheet of thick, rough-surfaced carrier paper. A fixed-bed plotter might work best.

One might also contemplate using a subtractive method: flood the raw PC board with
an acid-resistant compound (perhaps "bluing" as sold in gun shops?; Or coating the board
with soft wax?) and using a sharp stylus in the penholder to scrape away the resist
where one doesn't want copper to remain. The wax-removal method would need a vacuum-cleaner pickup to remove the wax shavings.

You might try a search on www.deja.com on the topic, and please do keep the NG posted as to your findings.

73,
Brad AA1IP

1743. Re: WIFB Article on QRP Transmitters and 2N2222's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-06 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38C46AFD.9B7FCB8C@valley.net>
Source record: 62844

Curtis Scholl wrote:

> Hello group!
>
> I hope I can get someone with back issues of QST to help here. Around
> 80/81 W1FB, Doug DeMaw,
> wrote some QRP Xmitter articles with schematics. The particular article I am
> looking for
> was a revisit and modification of an earlier project related article. I had
> a copy of the article and have misplaced/lost it.
>
> The article describes the modification of the final amp of a QRP
> transmiter by adding transistors in parallel and driving them to produce
> more power. There were 4 transistors in the final and they were 2N2222. The
> transistors were epoxied to the cobbled up heat sink of PC board.
> He used ferrite beads on the leads of the transistors to keep from radiating
> at VHF.

Hello--
In case anyone needs a quantity of similat transistors, I have the following
devices
available:

TN-2219A National Semiconductor NPN general-purpose NPN transistor:
100 < hFE < 300 at Ic= 150 mA; BVcbo = 75 V min.; BVceo = 40 V min.;
Icbo = 10 nA max. at Vcb= 60 V; Cob = 8 pf max.; Ft = 60 MHz min.
at Ic = 20 mA. NF 4 dB (max.)

In TO-237 metal-tabbed plastic package (similar to TO-92); this package
reduces thermal resistance from 125 C per watt for a TO-92 to 50 C per watt for
the TO-237.
Not bad for building a QRP rig for the low bands around a single device!
$1.00 for 20 pieces; $5.00 for 120 pieces

Contact me for postage, or more information.

73,
Brad AA1IP

1744. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Steve <stephen.wilson@cmr.uq.edu.au>
Message-ID: <38C448E0.135AE223@cmr.uq.edu.au>
Source record: 62749

We have had little luck using this technique and would appreciate some tips! The first problem is finding a plotter which will accept 2mm PCB. A Roland XY plotter was the best in the end but the ink would bead instead of coating the copper. For now it is back to the photographic (wasteful) technique but a working recipe would be welcomed.

Cheers,

steve w
s.wilsonremove@cmr.uq.edu.au

Robin G3LBA wrote:

> Plotting directly onto Laminate. I am doing this to make prototype PCB
> layouts which I then etch in Ferric Chloride, Is anyone else out there doing
> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>
> 73 Robin G3LBA

1745. IC-2410 frequency adjust

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Sutanto Raharjo <yong2@cbn.net.id>
Message-ID: <38C45C0E.3D3@cbn.net.id>
Source record: 62750

Hi.. does any one know how to adjust old IC-2410 frequency..
my old IC-2410 frequency shift-up 3 Khz,

mail'me please

Sutanto...
< yong2@cbn.net.id >

1746. Re: Microstrip Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: slug@alumni.REMOVE.dee.uc.pt
Message-ID: <8a1q5gfnv1@rena.mat.uc.pt>
Source record: 62751

pejman <pejman_mNOpeSPAM@hotmail.com.invalid> wrote:
> I want information about microstrip antenna design and

me too :)

1747. VFO Stabilizer/counter PLL board code

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38c481d5.16646826@news.m.iinet.net.au>
Source record: 62752

I have updated the website with source code for these borads
I have not yet completed the article for the PLL controller
(soon)
Boards and programmed controllers for the VFO stabiulizer are
available

I would be interested in comments on the code

Richard

1748. Re: Power Supply Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Murray Kelly <mkelly@powerup.com.au>
Message-ID: <38C48CF2.F028648C@powerup.com.au>
Source record: 62753

Sounds like a normal switch mode PSU but connected to
230 instead of 110vac. The line volts here are 240vac
and that is rectified to go across the 2 stacked
capacitors. You don't state the capacity of the caps.

Inside most of them is a jumper or switch so that
the recifiers can act as a doubler for 110-120vac
The voltage across the phases is not 120v on a house
supply in the US. It's more like 230v

At 150A the transistors must be pretty lumpish and the
ferrite transformers, too!

There have been some articles around lately about
using PC supplies for 14v output but at a much more modest
20A - 40A.

The ones you have sound as if they would make a great
starting place for a shack supply.
Hamm4fun wrote:
>
> I came across 4 Switching type power supplies rated at 15v 150 Amp each.
> Trouble is the power input to them is 3 phase. The input is a three phase
> rectifier and filter. The filter caps are a couple of big computer grade jobs
> rated at 200VDC. Looks like this should develope about 150VDC to supply to the
> inverter section of the power supply. I want to run this off of single phase
> power, any suggestions on how to do this would be appreciated. I was
> considering buiding an external 150vdc supply and connecting it to all three
> phases.

--
****
* Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
* 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
* ph/fax Intl+ 61 7 3379 3307 *
****

1749. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Roy McCammon <rbmccammon@ieee.org>
Message-ID: <38C4A0A7.B7105A05@ieee.org>
Source record: 62754
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> Then we're in agreement, I think. When a normal 1/2-wave
> dipole antenna absorbs energy from incoming EM waves, it
> is the charged matter within the metal which causes the
> antenna to grab energy from the EM waves. However,
> pointlike particles don't magically interact with EM
> waves, instead it is their surrounding fields which
> perform the trick. Regardless of the type of antenna,
> it is the LOCAL FIELDS associated with the charges
> which interact with the EM waves and cause the energy
> to eventually wind up flowing along the antenna's
> lead-in cable.

As a matter of terminology, it is usually said
that there is one field, but if convenient, it
can be decomposed into terms attributed to charges
and currents at a far away source and other
terms that are attributed to charges and currents
in the nearby antenna. But I also use the short
hand terminology of talking about these separate
terms as separate fields.

Anyway, it is certain that the total field with the
antenna is different from the total field
without the antenna.

> That's why I keep saying that the FIELDS of the electrically
> short antenna are reaching out and grabbing EM waves.

I think I'd say that the currents and charge distributions
in the antenna distort the field from what it would be
if the antenna were not there.

> > Interference patterns are simple superposition. The Principle of
> > Superposition says that the components of a superposition are
> > *unaltered* by the superposition. Beyond the superposition zone
> > we still have the same two waves, still with the same directions
> > and the same energies as they had before the superposition
> > occurred.
>
> True for propagating waves, but not true for the fields in
> the nearfield zone of a piece of charged matter such as an
> antenna.

I'd say it was true for independent waves. But what is
different here is that the field component from the antenna
currents is dependent on the component from the far away
sources. Another way of looking at it is simply that
the field with the antenna is different from the field
without the antenna.

> When a half-wave dipole generates a local field,
> the end result is that some of the energy in the incoming
> EM waves is intercepted by the antenna. Superposition
> still holds true, yet that half-wave dipole was able
> to punch a hole in the wavetrain of EM waves passing by.
> Do you object to this?

My objection is one of emphasis. The way you have told it,
it sounds to me like you consider the source fields and the
antenna field to be two separate fields. I would say there
are two fields: one for the case with the antenna and one for
the case without (sounding now somewhat like a broken
record).

> If not, then why are electrically
> small resonant antennas (with their huge local fields)
> such a problem?

I missed something. What problem?

> I think not. I think I'm unable to get my ideas across
> clearly. Also it might be because I'm coming from an
> unconventional viewpoint; thinking in terms of the
> local fields generated by an antenna rather than in terms
> of current through it or voltage across it. I hadn't
> realized this was unconventional, but people here are
> attacking some concepts which I didn't think were
> controversial or even open to debate.

I think its just the way you tell it.

I think you could even apply your view to dc circuits.
The load allows currents to flow which change the fields
from what they would be if there were no currents. And if
there were no currents, Poynting's vector integrated over
the surface of the load would be zero.

1750. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a2ova$f7k$1@nnrp1.deja.com>
Source record: 62755
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38C4A0A7.B7105A05@ieee.org>,
Roy McCammon <rbmccammon@ieee.org> wrote:
> Science Hobbyist wrote:
> As a matter of terminology, it is usually said
> that there is one field, but if convenient, it
> can be decomposed into terms attributed to charges
> and currents at a far away source and other
> terms that are attributed to charges and currents
> in the nearby antenna. But I also use the short
> hand terminology of talking about these separate
> terms as separate fields.

Sure. I see it in terms of mental models. Having a variety
of mental models gives us a "larger toolkit". If we see
the field as a single entity, some interesting ideas
unfortunately vanish. My hobby is to look for unorthodox
viewpoints in hopes of gaining insights I lacked before.
But since the ideas aren't in all the textbooks, I don't
trust them entirely, and I put them here so others might
find any obvious holes which I've missed.

With these antennas, I've been thinking in terms of three
viewpoints: incoming EM waves without the antenna fields,
antenna-generated fields without the incoming EM waves,
and also the superposition.

Which leads me to wonder: don't halfwave dipoles also
generate their own fields? If the field being generated
by a tiny resonant antenna is the reason that the antenna
can absorb EM waves, maybe the same idea applies to ALL
antennas.

> > That's why I keep saying that the FIELDS of the electrically
> > short antenna are reaching out and grabbing EM waves.
>
> I think I'd say that the currents and charge distributions
> in the antenna distort the field from what it would be
> if the antenna were not there.

OK, but it is not obvious that a current alone can "draw in"
the energy of an EM wave. Thinking in terms of the field
produced by that antenna current helps explain what's going
on. It takes some of the mystery out of the "nearfield"
stuff. The Bohren paper has a diagram where the dipolar
e-field of a tiny antenna is added to the e-field of

incoming plane EM waves, and when the Poynting vector is
plotted (it's perpendicular to the distorted field lines)
it proves to deflect inwards and dive into the tiny antenna.
Very weird.

> I'd say it was true for independent waves. But what is
> different here is that the field component from the antenna
> currents is dependent on the component from the far away
> sources.

Not totally true in the case of the resonant antenna. Yes,
the stored energy in the resonator did originally come from
the incoming EM waves. However, it built up over many
cycles. If the incoming wavetrain was to suddenly come
to an end, then the oscillating fields produced by the
small antenna's LC circuit would continue. (The antenna
is too small to radiate much energy.) The antenna's
fields are not created by the incoming EM waves, instant
by instant, and it is conceivable that they could be
created by a power supply with the goal of increasing the
antenna's effective size, as Sutton and Spaniol did in
their active ELF antenna (papers referenced at the end
of http://www.amasci.com/tesla/tesceive.html)

> My objection is one of emphasis. The way you have told it,
> it sounds to me like you consider the source fields and the
> antenna field to be two separate fields.

But they are, and in the same way that the fields of
two bar magnets are "separate" whether the bar magnets
are adjacent or very distant. It's also true that the
EM waves will permanently alter the fields of the small
antenna, but it takes many cycles for this to occur.

If we suddenly remove the incoming EM waves, yet the
antenna's fields persist, then I think I have reason to
assert that the antenna's fields are an independant entity
(which of course can superpose with any other field which
happens to appear.) And if we have two bar magnets, we
usually think in terms of two dipole fields which are
superposed, rather than thinking in terms of a single
more complicated field which cannot be decomposed into
something simpler.

> I would say there
> are two fields: one for the case with the antenna and one for
> the case without (sounding now somewhat like a broken
> record).

Heh. And a third: the case where there are no incoming
EM plane waves, but the LC circuit in the tiny antenna is
still oscillating and producing a local field surrounding

the antenna.

>
> > If not, then why are electrically
> > small resonant antennas (with their huge local fields)
> > such a problem?
>
> I missed something. What problem?

My previous reply was to Mr. Coffman, who insisted that
an AC EM field could not deflect the Pointing vector of an
EM wave (and therefore I am wrong about the ability of
these tiny antennas to deflect EM energy into themselves.)

>
> > I think not. I think I'm unable to get my ideas across
> > clearly. Also it might be because I'm coming from an
> > unconventional viewpoint; thinking in terms of the
> > local fields generated by an antenna rather than in terms
> > of current through it or voltage across it. I hadn't
> > realized this was unconventional, but people here are
> > attacking some concepts which I didn't think were
> > controversial or even open to debate.
>
> I think its just the way you tell it.

Right! I'm speaking in clear terms, yet they are
unconventional, so everyone seems to have objections.
Yet there is nothing wrong with my terminology, except
that it is non-traditional. My goal is to see if others
can find a hole in my arguments, and to make myself
think. Unfortunately, this tends to force others to
think as well, and I suspect that many people don't
enjoy that one bit! :) Of course I'm getting a bit
of an advantage, since I've been beating my head on these
ideas for awhile, rather than having them suddenly dumped
into my lap by some weirdo on the newsgroups.

> I think you could even apply your view to dc circuits.
> The load allows currents to flow which change the fields
> from what they would be if there were no currents. And if
> there were no currents, Poynting's vector integrated over
> the surface of the load would be zero.

Yeah! And circuits connect with antennas in the realm of
AC motors. A coil can drive a rotating permanent magnet.
If the magnet bearings have friction, the magnet is essentially
"sucking energy" from the drive coil, and integrating the
Poynting vector over a spherical surface surrounding only the
magnet would show energy flowing inwards. That same magnet
can be driven by radio waves (if the frequency is very low
or the RPM of the magnet is very high.) In that situation,

EM energy is absorbed by the rotating magnet and it ends up as heat in the bearings. This is a very unorthodox "radio antenna", no? If the magnet size is << wavelength, then it is very similar to these electrically small resonant antennas. If the magnet is made very strong, then it couples more strongly to the incoming EM waves, and can extract a larger energy flow. And if the EM field generated by the resonator builds up to a high amplitude, that antenna "acts larger" than it actually is.

Overall idea: take a standard receiving antenna, realize that the antenna currents generate their own fields, then conceptually shrink that antenna while adding some circuitry which keeps its field pattern strong at a 1/4-wave distance. You can shrink the antenna to any small size, yet if the antenna-generated field remains large, the received power will not decrease much. AM radio antennas the size of large molecules become possible, at least in theory. A desktop longwave antenna with the electrical size of a broadcasting tower becomes possible (although superconducting materials are probably required.)

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1751. Re: Microstrip Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <3Z5x4.41782$3b6.187613@ozemail.com.au>
Source record: 62756

artech house sell many books on microstrip antennas, they have a web page.

<slug@alumni.REMOVE.dee.uc.pt> wrote in message
news:8a1q5gfnv1@rena.mat.uc.pt...
> pejman <pejman_mNOpeSPAM@hotmail.com.invalid> wrote:
> > I want information about microstrip antenna design and
>
> me too :)

1752. Digital Display for MFJ 9402 2M SSB rig?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: k4yz@aol.com
Message-ID: <20000307070751.02740.00000537@ng-fx1.aol.com>
Source record: 62757

Hello All,

I have the MFJ 9402 for 2M SSB. It's a great little rig, but the analog dial makes it difficult to duplicate returning to a given frequency, even the calling frequency at 144.2MHZ unless there's traffic there.

Anyone got a lead on a good digital freq readout that could be adapted to this rig?

Direct E Mail replies welcomed.

73

Steve, K4YZ
Dunlap, TN EM75

1753. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <J5AwmBAUHQx4Ewyi@g0wbf.freeserve.co.uk>
Source record: 62758

In article <38C448E0.135AE223@cmr.uq.edu.au>, Steve
<stephen.wilson@cmr.uq.edu.au> writes
>We have had little luck using this technique and would appreciate some tips!
>The
>first problem is finding a plotter which will accept 2mm PCB. A Roland XY
>plotter was the best in the end but the ink would bead instead of coating the
>copper. For now it is back to the photographic (wasteful) technique but a
>working recipe would be welcomed.
>
>
>Cheers,
>
>steve w
>s.wilsonremove@cmr.uq.edu.au
>
>Robin G3LBA wrote:
>
>> Plotting directly onto Laminate. I am doing this to make prototype PCB
>> layouts which I then etch in Ferric Chloride, Is anyone else out there doing
>> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>>
>> 73 Robin G3LBA
>

The trick is to use a laser printer to print on to Epson Photo Quality
paper, then iron it onto the PCB. Soak it in hot soapy water to remove
paper and leave toner behind. It works a treat.
--
Barry McCarthy

1754. Re: Linear amp for 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8a31m8$2al@nnrp3.farm.idt.net>
Source record: 62759

Bill Turner, W7TI <w7ti@jps.net> wrote in message
news:aci7csk521dbqgbuvp218lp5tppsqo06sn@4ax.com...
> _____
> Leland, with all due respect, I have to disagree. Anyone who works
> weak-signal DX will tell you that 6db is often the difference between
> qso and no qso. Hams spend hundreds of dollars for antennas which
> give them a few db more, and for good reason. True, when the signal
> is 20 over 9, then 6db is not noticeable, but not when it's in the
> noise.

As I have been reminded here a few times about working at the noise floor I have to agree. Seems I spoke up a little to quick with out thinking about it much. Live and learn. Thanks for keeping me focused on all of the points.

--
Leland C. Scott
KC8LDO

1755. Help with manuals Autek RF1&RF5!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Igor Dobrokhotov <UN7GM@QSL.NET>
Message-ID: <8a36t4$7n6$1@mail.nursat.net>
Source record: 62760
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi folks!
Couple weeks ago I'd bought Autek RF1 & RF5 for very reasonable price.
RF5 had some defects but now all OK. Unfortunately both units was
supplied without User Manuals.
I would be very obligated if somebody can supply me of manual's
electronic copy.
Another question - I need the schematic for Ameritron QSK-5. On the
website of manufacturer I'd find instruction only.
Thank you in advance,
Igor Dobrokhotov UN7GM
mailto:un7gm@qsl.net

1756. FIND IT HERE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: eagleluv1@webtv.net
Message-ID: <13792-38C51DFB-5@storefull-165.iap.bryant.webtv.net>
Source record: 62761
Body handling: HTML body converted to readable text

www.clickheetofind.com/index.php3?l=eagleluv1

html>

1757. FM yagi antenna design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Laurent Bacik <laurent.bacik@bt.com>
Message-ID: <38C52586.7F8A2A7C@bt.com>
Source record: 62762

Hi,

I am looking for a good design for, say, 9-element yagi antenna for high

quality FM reception. Includes design with more than 1 driven element.

Any suggestions ?

Thank you,

Laurent (laurent.bacik@bt.com).

1758. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38C52406.82146DD5@nospam.gecm.com>
Source record: 62763
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> In article <38C4A0A7.B7105A05@ieee.org>,
> Roy McCammon <rbmccammon@ieee.org> wrote:
> > Science Hobbyist wrote:
> > As a matter of terminology, it is usually said
> > that there is one field, but if convenient, it
> > > If not, then why are electrically
> > > small resonant antennas (with their huge local fields)
> > > such a problem?
>
>
> You can shrink the antenna to any small size, yet if the
> antenna-generated field remains large, the received power
> will not decrease much. AM radio antennas the size of
> large molecules become possible, at least in theory. A
> desktop longwave antenna with the electrical size of a
> broadcasting tower becomes possible (although
> superconducting materials are probably required.)
>
>

William - I have not followed this argument in detail, but you
might be interested in a fundamental theory which gives the
bandwidth of small antennas in terms of their size in wavelengths.
The theory, based on a transmitting antenna, establishes the stored
energy as a multiple of the radiated energy to derive a Q factor
which leads to an expression for the the bandwidth.
The paper, by Chu, is in J. Applied Physics, Dec. 1948, and the
theory gives an upper limit for bandwidth in terms of the radius of
the smallest sphere which can enclose the antenna, and it is
independent of the details of the particular antenna. A good
approximation from the theory, for a lossless antenna, is:
B/f0=250(r/lambda)^3
B is bandwidth, f0 is carrier frequency, r is the sphere radius
and lambda is the wavelength.
For a 150mm loopstick at 1MHz the bandwidth comes out at
0.004Hz from the formula BUT in practice there is sufficient
loss resistance present to raise the bandwidth to (say) 40kHz, a
factor of 10^7, whilst reducing the gain by 70dB. This is acceptable
because enough power is transmitted, and sufficient amplification is
present in the receivers, to make it acceptable. The theory might
provide guidance about the feasibility of atom-sized antennas.
Alan

1759. Re: Need ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8a3go2$l1$1@nnrp1.deja.com>
Source record: 62764

In article <38C48756.76E811F4@clifto.com>,
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote:
> What I really need is a DC-to-light spectrum analyzer, but since I'm
many
> dollars away from that I'm going to have to come up with some
alternative.
> I'd like ideas for homebrewing some sort of gizmos to start detecting
> whatever man-made, NON-QRN interference appears to be around here.
>
> Weird things are happening all over the house, but mostly in the
shack-
> cum-computer-room.
>
> 1. GE 900 MHz *spread-spectrum* cordless phone. Ordinarily, it works
great;
> goes a full block easily. At odd times, for periods of one to three
hours,
> something appears to be interfering with it so badly that it needs to
be
> within six inches of the base unit to function; three feet away and it
> suffers lots of segments of "dead air", i.e. chopping in and out.
>
> 2. LG digital cell phone. Works wonderfully everywhere, except at odd
> times and around the house, especially in the shack. Suddenly for
periods
> of one to three hours, signal strength is nearly nothing, operation is
> terrible.
>
> 3. Ten days ago I bought on clearance a Radio Shack "atomic" clock
that
> sets itself by WWVB. According to its manual it checks the time
several
> times each day. Tonight for the first time it was blinking an
indicator
> that says it had not been able to set itself for the past 48 hours.
TEN
> SECONDS in another part of the house (literally the time it took to
walk
> to the kitchen) was enough to reset it. The unit and its antenna were
in
> the same exact spot for the ten days in which I've owned it. AM
reception
> on my FRG-7, three feet from the clock, shows no QRN-type
interference,

> but all AM stations have a peculiar sound defect similar to what you'd get
> from a dirty potentiometer; all controls are fine (if there's one thing
> I *can* do, 33 years after I started working in TV service, it's to clean
> controls and switches).
>
> 4. (Probably incidental; included for completeness.) DSL was installed here
> January 27. The provider has been able to go to a full megabit for other
> installations as far as 12,000 line-feet from the DSLAM; I am measured at
> 4700 feet and can only get 784K. Provider cites strange noise on the lines
> and expresses surprise that they can't go any faster on that short a line.
>
> 5. No CBers in the area; nearest ham is five blocks away and has been for
> nine years with no problems. Closest likely RF source is a land mobile
> tower two blocks from here; again, it's been two blocks from me for nine
> years. Nothing heard through FRG-7, televisions, VCR, stereos (component
> and handheld), speakers or computer audio. Nothing seems out of the ordinary
> on the BC700A scanner, but it has enough images to make it nearly useless
> as a detection tool. Old, cheap diode-and-d'arsonval FSM shows nothing.
> There are numerous cell towers within a mile, no new ones in the last two
> years.
>
> 6. There are long periods of impulse QRN in this general area from various
> sources at various times. There seems to be no relation between that and
> the problem described above, as there is not always impulse QRN detectable
> during these times (handheld AM radio used as detector).
>
> --
>
+-+
> | Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |

> | WA9PDM |
|
> +-+-+-+-+-+-+-+-+- http://www.spamfree.org/
+-+
>

Are you sure you don't have any doctor's office or physiotherapeutic
clinic with 'short wave' equipment in the neighborhood? These devices
uses to be VERY interferent....
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1760. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8a3evc$1lk6$1@ausnews.austin.ibm.com>
Source record: 62765

In <8a10o4dks1@news8.svr.pol.co.uk>, "Robin G3LBA" <robin@g3lba.freeserve.co.uk> writes:
>Plotting directly onto Laminate. I am doing this to make prototype PCB
>layouts which I then etch in Ferric Chloride, Is anyone else out there doing
>the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>
>73 Robin G3LBA
>
>

I've wondered about this, too, but I haven't had time to try anything. Currently, I'm using the laser-printer method where the board graphic is printed on a laser-printer, and then the toner from the paper is thermally transferred to the board. It works, but it's a bit sensitive to board cleanness, toner density, iron temperature, etc. (Phase of the moon?)

Most of the plotters readily available now seem to want to move the paper to control one dimension, although the Roland mentioned later in this thread is an XY plotter which should work. Additionally, I used to have access to an ancient HP plotter which was a true XY plotter (I think it attached to an HP 9830 computer system, but it's been years ago since I last used it.).

One of the things I've considered is that instead of using ink, to modify an XY plotter to mount a light source where the pen fits. Then, it should be possible to place a photo-sensitized board on the plotter, and directly plot a photographic image on the board (Disconnect the pen up-down solenoid, and use that signal to turn the light source on and off.).

Selection of the appropriate light source might be a problem. I'm aware that there are UV LEDs available (UV laser diodes?). With the correct optics, this might get enough light onto the board to expose a photoresist, if a sensitive enough photoresist exists. Of course, it might be necessary to verify that the pen speed of the plotter is relatively constant.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

1761. Re: VFO Stabilizer/counter PLL board code

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <38C53F83.FC0CC3D@email.mot.com>
Source record: 62766

What's the link?

Richard Hosking wrote:
>
> I have updated the website with source code for these borads
> I have not yet completed the article for the PLL controller
> (soon)
> Boards and programmed controllers for the VFO stabiulizer are
> available
>
> I would be interested in comments on the code
>
> Richard

Chuck KD9JQ

1762. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <8a3jgr$4eb$1@SOLAIR2.EUnet.yu>
Source record: 62767
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

1763. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a3o34$r17$1@newsg2.svr.pol.co.uk>
Source record: 62768

Wow! What a response. I guess this is an interesting topic.

I use a Roland Sketchmate which is a flatbed A4 plotter. I have machined out an old HP pen to accept the Black Staedtler Lumicolor permanent Overhead pens type S(313) and F (318) I find the ink is good at resisting the ferric chloride.
I use a programme called Proteus Lite (Labcenter.co.uk) and they have a neat plotter driver for this purpose. When setting up the 7475 emulation in windows It is essential to reduce the pen speed to 1 or 2 cm/sec if using S pens. I go up to 3 for F pens. This puts more ink on the board.

I like the idea about the optical plotting I will think about this. There are lots of IR diodes about are there UV ones?
Thanks folks for the contributions.
73 Robin

Robin G3LBA <robin@g3lba.freeserve.co.uk> wrote in message news:8a10o4dks1@news8.svr.pol.co.uk...
> Plotting directly onto Laminate. I am doing this to make prototype PCB
> layouts which I then etch in Ferric Chloride, Is anyone else out there doing
> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>
> 73 Robin G3LBA
>
>

1764. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: trueblood_m@compuserve.com
Message-ID: <38c56694.4140576@news.compuserve.com>
Source record: 62769

On Mon, 6 Mar 2000 19:25:59 -0000, "Robin G3LBA"
<robin@g3lba.freeserve.co.uk> wrote:

>Plotting directly onto Laminate. I am doing this to make prototype PCB
>layouts which I then etch in Ferric Chloride, Is anyone else out there doing
>the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.
>
>73 Robin G3LBA
>
>

IMHO by far the easiest method is to use a flat bed pen plotter that will plot the circuit directly onto copper. I use a HP 7475A with the a pen modified to take a permanent marker. Staedtler Lumocolor 317 works O'K The software is Easytracks by Protel which is a DOS freeware program and works very well, drives the plotter without any problem.

I haven't done any in depth experimenting but the minimum track width is dependant upon the pen used. The thinnest I've tried is 'F' which gives a line about 12 thou thick.
It is best if the line is drawn twice over. This can be done by 'telling' the Easytraks program that the pen width is slightly less than the plot width, by a couple of thou'. The actual pen width must be wider than that defined to the program so that lines drawn for in-fill overlap.

Easytraks also allows the pen speed to be defined in inches/sec I've used 0.5 "/sec O'K. Its a case of juggling the three parameters, the actual pen width, what you 'tell' Easytraks the pen width is and how fast the pen/paper (pcb) is to move. Keeping in mind you dont want gaps between lines in the in-fill area's and double over drawing for the tracks. Laying the tracks twice on the drawing is another method as well as plotting the complete drawing twice. All these methods seem to produce a heavy enough ink deposit.

The neatest is to plot the complete drawing twice making shaw that the lines overlap in the in-fill areas.

I use double sided Sellotape to fix the copper board to a sheet of A4 paper, just a couple of pieces seem to work, no need to cover the whole board. My boards are small 4" X 2".

The Staedtler pen ink can be removed with acetone (nail polish remover).

As this is quick to do it's no problem to clean the ink off
and give it another try.
--
MikeT
Liverpool
U.K.

1765. Re: Need ideas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38C5724A.250138AB@clifto.com>
Source record: 62770

py1ll@my-deja.com wrote:
> Are you sure you don't have any doctor's office or physiotherapeutic
> clinic with 'short wave' equipment in the neighborhood? These devices
> uses to be VERY interferent....

I'm sure. The closest office of any kind (other than the grammar school
across the street) is nearly a mile away.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

1766. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cau2g.kkc.root@radioactivex.lebesque-al.net>
Source record: 62771
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

> Which leads me to wonder: don't halfwave dipoles also
> generate their own fields? If the field being generated
> by a tiny resonant antenna is the reason that the antenna
> can absorb EM waves, maybe the same idea applies to ALL
> antennas.
>
The physics must be common to all. Practical considerations
limit the usefulness of many possible geometries.

> Not totally true in the case of the resonant antenna. Yes,
> the stored energy in the resonator did originally come from
> the incoming EM waves. However, it built up over many
> cycles. If the incoming wavetrain was to suddenly come

This cannot be true. Many photons, yes, many cycles, no.
The energy cant be stored over a period greater than the
frequency of the wave, otherwise, the modulations would be
washed out. In an amplifier, you would call the lack of
ability to change at the signal rate a slewing limitation.

1767. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8catav.kkc.root@radioactivex.lebesque-al.net>
Source record: 62772
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <2SLDOA06BxInEyIe8j22pv4W+kcV@4ax.com>,

>
> Then we're in agreement, I think. When a normal 1/2-wave
> dipole antenna absorbs energy from incoming EM waves, it
> is the charged matter within the metal which causes the
> antenna to grab energy from the EM waves. However,
> pointlike particles don't magically interact with EM
> waves, instead it is their surrounding fields which

No, the energy received by an antenna is exactly the interaction of
photon with a pointlike electron. The size of the antenna is what
determines how efficiently it provides electrons to cover the volume
of space in which that photon has a probability of being found.
A standard dipole just happens to meet this condition (along with
a couple of others). It doesnt have a monopoly on geometry. It just
happens to be particularly simple.

> That's why I keep saying that the FIELDS of the electrically
> short antenna are reaching out and grabbing EM waves. The

The fields cant do anything but move charges. If you can explain
it in that context, then you may be able to justify that statement,
but otherwise that statement is wrong.

> to punch a hole in the wavetrain of EM waves passing by.
> Do you object to this? If not, then why are electrically
> small resonant antennas (with their huge local fields)
> such a problem?
>

Because you are ignoring the antenna's and the rest of the system's
requirements for providing a signal from the currents produced by
radiation incident on the antenna.

> I think not. I think I'm unable to get my ideas across
> clearly. Also it might be because I'm coming from an
> unconventional viewpoint; thinking in terms of the
> local fields generated by an antenna rather than in terms
> of current through it or voltage across it. I hadn't
> realized this was unconventional, but people here are
> attacking some concepts which I didn't think were
> controversial or even open to debate.
>
In that case, try changing your viewpoint, because you aren't

making it clear that you are using the terminology in a way
that doesn't make your statements incompatible with the physics
you claim isnt in disagreement.

> If you are certain that a normal half-wave dipole can
> intercept EM waves without the dipole generating fields
> of its own, then we have a serious problem. If you

Of course there is a field. If there were not, no current
would flow, making it totally useless as an antenna. A charge
is accelerated by the incoming photon. Because it is displaced
from equilibrium, it produces forces on other charges and so
on. This is the definition of a current.

1768. Want UTC CG-301 transformer info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Doug Snowden <dsnowden@ncdc.noaa.gov>
Message-ID: <38C576D4.CB0DC24E@ncdc.noaa.gov>
Source record: 62773

I have a UTC CG-301 transformer that I'd like to know the pinout (what pin has what voltage. I
realize I could play with it for a while and figure it out - but if you have an old catalog
or spec sheet it would save me time. It has
about 12 pins, probably 6 ac input and 6 output
taps. It is probably around 700-1000vct trans-fomrer, but I'm not
sure. Thanks in advance

Doug N4IJ
dsnowden@ncdc.noaa.gov

1769. Re: VFO Stabilizer/counter PLL board code

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c587ec.108691604@news.online.no>
Source record: 62774

On Tue, 07 Mar 2000 04:18:00 GMT, richardh@iinet.net.au (Richard Hosking) wrote:

>
>I have updated the website with source code for these borads
>I have not yet completed the article for the PLL controller
>(soon)
>Boards and programmed controllers for the VFO stabiulizer are
>available
>
>I would be interested in comments on the code
>
>
>Richard

and the URL is....?

JM

1770. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a43e6fan1@nnrp1.deja.com>
Source record: 62775
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8cau2g.kkc.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> > Not totally true in the case of the resonant antenna. Yes,
> > the stored energy in the resonator did originally come from
> > the incoming EM waves. However, it built up over many
> > cycles. If the incoming wavetrain was to suddenly come
>
> This cannot be true. Many photons, yes, many cycles, no.
> The energy cant be stored over a period greater than the
> frequency of the wave, otherwise, the modulations would be
> washed out.

Right. If the energy is stored over many cycles, then fast
modulations will be washed out. That's what I'd expect.
The time constant for flourescent materials is long compared
to period of the waves involved. A resonant antenna would
act as if the incoming waves "pump it up" over time.

> In an amplifier, you would call the lack of
> ability to change at the signal rate a slewing limitation.

We're talking about the same thing, right? A high-Q tank
circuit connected to an electrically small antenna? We
shouldn't be suprised if it behaves differently than a simple
1/2-wave dipole. Because the tank circuit has high Q, won't
it respond slowly to changes? If the incoming wavetrain
begins abruptly, how could the high-Q tank circuit instantly
absorb enough energy to follow that leading edge of modulation?
And if the wavetrain suddenly ceases, why wouldn't the tank
circuit keep oscillating for many cycles? Because the tiny
antenna is weakly coupled to the incoming waves, won't the
AC voltage across the tank circuit change fairly slowly even
though the modulation is fast? (Hmmm. If the tank circuit had
infinite Q, maybe it would take infinite time for it to
aquire any energy from the EM waves.)

In the case of a real antenna like an AM radio loopstick,
it would make little difference if there was a significant
slewing limitation, since the audio bandwith is at least
50 times smaller than the carrier frequency. If it took
a 20-cycle time constant for the tank circuit to settle
to the instantaneous modulation envelope, the audio
fidelity wouldn't be changed much. Since the Q of a
realworld loopstick antenna isn't incredibly high, it

probably responds fairly quickly, rather than in hundreds
of cycles. It's a good point you've brought up though.
Raising the Q to enhance the "energy sucking" effect
might be good for S/N ratio, but bad for bandwidth and
audio fidelity of an AM signal.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1771. FS: About 200 books posted for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <8a461q$4n8$1@ns2.foothill.net>
Source record: 62776

I have posted about 200 books for sale at:

http://www.muchstuff.com

Gene

1772. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-07 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <eAnx4.16603$84.505168@elnws01>
Source record: 62777
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...
>
> >On Sat, 04 Mar 2000 00:26:02 GMT, Science Hobbyist <bbeaty@microscan.com>
wrote:
>
> >I'm certain that fields (photons) can only be altered due to the
> >mediation of charged matter. Other fields alone cannot alter them.
>
> Yes, but it seems the statement needs to be repeated, and often.
> So continue to throw it in, prn.

Did you know photons have a magnetic moment? That circular polarized laser
beams attract? ;-)

> >Interference patterns are simple superposition. The Principle of
> >Superposition says that the components of a superposition are
> >*unaltered* by the superposition. Beyond the superposition zone
> >we still have the same two waves, still with the same directions
> >and the same energies as they had before the superposition
> >occurred.

Solitons can do strange things, see http://www.sfu.ca/~renns/lbullets.html

Scott

1773. Wheeler method (field strength)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: CA <x@y.z>
Message-ID: <Vjyx4.756$_Z2.1557@nntpserver.swip.net>
Source record: 62695

I'm looking for information on the Wheeler method, used in field strength measurements.

/Christer
sm6pxj

1774. Newbie needs help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <8a6brg$5q0$1@newsg3.svr.pol.co.uk>
Source record: 62696

Hi All,

I've been collecting valve based transmitters and receivers for a while and thoroughly enjoy them.

I've now reached the point where I want to have a go at build a valve transmitter, either CW or SSB.
Ideally I'd like it to be SSB on 160m as this is a great band for local nets.

Can anyone give me any clues as to where to start ?
Does anyone have any URL's with circuit diags on that I could use to build my first valve TX ?

Please reply to the group but also reply to me directly on the CC as my provider is a tad laxing
when it comes to news groups :)

Cheers!

MikeT ...
M0AWS

1775. Need UTC CG-301 transformer info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Doug Snowden <dsnowden@ncdc.noaa.gov>
Message-ID: <38C6B0A0.85289D9E@ncdc.noaa.gov>
Source record: 62697

Can someone find an old catalog and tell me
what the pinout (voltages) are there for an
old UTC CG-301 transformer?

Doug,
dsnowden@ncdc.noaa.gov

1776. Re: Newbie needs help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000308151934.17322.00001631@ng-xe1.aol.com>
Source record: 62698

>
>I've now reached the point where I want to have a go at build a valve
>transmitter, either CW or SSB.
>Ideally I'd like it to be SSB on 160m as this is a great band for local
>nets.
>
>Can anyone give me any clues as to where to start ?
>Does anyone have any URL's with circuit diags on that I could use to build
>my first valve TX ?
>
>Please reply to the group but also reply to me directly on the CC as my
>provider is a tad laxing
>when it comes to news groups :)

Mike,

My advice, if you have never built anything from scratch before, would be to start simple. One of the classic one-tube CW transmitters using a crystal and a 6V6 or something along those lines. There's a lot of satisfaction in seeing it work, and using it on the air. Failing at a project too complex for a first try will tend to discourage you. The best matadors start with the small bulls and work their way up.

Doug Moore KB9TMY (Formerly K6HWY)

1777. Re: WTB: Tektronix 2445 Oscilloscope Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38C6E0E1.9666404B@home.com>
Source record: 62699

try www.oscilloscopesetc.com - I bought a CRT for a 2215 from him.

Fred Allen wrote:

> I am looking for a junker Tektronix 2445 Oscilloscope, or just the power
> supply/regulator board, with the cooling fan, (the fan and the fan circuit
> board is a MUST!!!).
>
> Please e-mail price to:
>
> fallen-idc@worldnet.att.net

1778. Re: UV Light Boxes for PCB's ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Colin <colinlowe@jet.es>
Message-ID: <8a6d0p$2iu$1@lola.ctv.es>
Source record: 62700

OK Tom, many thanks I will check the link out and see if it will do the trick.

73 de Colin
http://personales.jet.es/colinlowe/index.htm
colinlowe@jet.es

Tom Bruhns wrote in message <38C69DD4.AB693ABE@agilent.com>...
>Have a look at:
>
>http://www.thinktink.com/index.htm
>
>There's a lot of stuff there on serious PC board prototyping, including
>instructions for making a good light box. (From the index page, select
>"go to page..." --> "Make your own gear," or just start directly at that
>page: http://www.thinktink.com/stack/volumes/voliii/homespun.htm)
>
>There's also a page on the chemistry, care and feeding of a cupric
>chloride etch bath on http://www.dnai.com/~rexa/Projects/CuCl_ech.html,
>FWIW.
>
>Cheers,
>Tom
>
>Colin Lowe wrote:
>>
>> I am looking for plans for a UV light box for making homebrew PCB's.
>>
>> If you have any plans or links to WWW pages please reply.
>>
>> 73 de Colin

1779. Re: Newbie needs help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: John Ireland <ja4ir4@harborside.com>
Message-ID: <8a6glr$1gm$1@news.harborside.com>
Source record: 62701

Here is a good place to start.
http://www.geocities.com/CapeCanaveral/Hall/8701/hamfiles.htm
john

Mike Tatum wrote in message <8a6brg$5q0$1@newsg3.svr.pol.co.uk>...
>Hi All,
>
SNIP
>Does anyone have any URL's with circuit diags on that I could use to build
>my first valve TX ?
>
>Cheers!
>
>MikeT ...
>M0AWS
>
>

1780. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <9Xzx4.16634$84.508170@elnws01>
Source record: 62702
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Richard Herring wrote in message <8a5do9$g5d$2@miranda.gmrc.gecm.com>...
>In article <eAnx4.16603$84.505168@elnws01>, Scott Stephens
(Scott2@Mediaone.net) wrote:
>
>> Bilge wrote in message ...
>> >
>> > >On Sat, 04 Mar 2000 00:26:02 GMT, Science Hobbyist
<bbeaty@microscan.com>
>> wrote:
>> >
>> > >I'm certain that fields (photons) can only be altered due to the
>> > >mediation of charged matter. Other fields alone cannot alter them.
>> >
>> > Yes, but it seems the statement needs to be repeated, and often.
>> > So continue to throw it in, prn.
>
>> Did you know photons have a magnetic moment?
>
>Really? What's its value? How did you measure it?

I'm sorry, I looked for the article but can't find it. I don't expect you to take my word for it. Maybe a post to some physics newsgroup would get an answer?

Scott

1781. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a6j16imi1@newsg1.svr.pol.co.uk>
Source record: 62703

How good is the linearity of the laser printer? I have a IIID and I find it pretty good but nowhere near a plotter for accuracy..

Robin
> The trick is to use a laser printer to print on to Epson Photo Quality
> paper, then iron it onto the PCB. Soak it in hot soapy water to remove
> paper and leave toner behind. It works a treat.
> --
> Barry McCarthy

1782. help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <38C6D4D8.B56@mad.scientist.com>
Source record: 62704
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

i've gotten a uhf duplexer [celwave 633-6a 1n] and would like
to tune this with an exciter, wattmeter, and dummy load.
i've been led to believe this is possible if not entirely accurate.
a fellow ham will be able to do the spectrum analyser thing
on it in a few weeks but would like to get this thing in the
loop before that.

any ideas where everything goes =]

3 n connectors for the common rx and tx.
thanks for your time
--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

1783. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: ke2ls@attglobal.net
Message-ID: <38C71A9C.FAEBB83@attglobal.net>
Source record: 62705
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Don't even waste your time trying to tune duplexers with a dummy load
and watt meter...Never tune a duplexer with RF power applied !!

KE2LS
145.27, 224.78, 442.70, 53.13
Repeaters Powered by GE/Ericsson

1784. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Jim Pennino <jimp@mail.specsol.com>
Message-ID: <iba7a8.2rm.ln@mail.specsol.com>
Source record: 62706

The best results I've had with sort of thing is laser print (or a copy if
you don't have a laser printer) onto transparancy film.

The hot iron (warm actually) transfer method worked better with the film
than with any of the papers I tried.

And it's not too hard to make simple double sided boards with this method
since you can see through the film and get things lined up easier.

Jim Pennino

Robin G3LBA <robin@g3lba.freeserve.co.uk> wrote:
> Plotting directly onto Laminate. I am doing this to make prototype PCB
> layouts which I then etch in Ferric Chloride, Is anyone else out there doing
> the same? Wish to swap experiences/ideas/knowledge of pens.. ink resist etc.

> 73 Robin G3LBA

1785. High Voltage connector sets (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38C6B610.24C40FBB@pa.net>
Source record: 62707

I am searching for some good high voltage connectors. 'have
heard that the old style connector (Millen, I think) is not
preferred these days. What do you have in your goodie box
that is newer. SHVs? maybe. .for that matter do you have any
Millen. . .I can mount em on Plexiglas if necessary. .
.'need two sets. . plugs, receptacles. . even some HV red
and black wire if ya got it. . .
Art

1786. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38C5C322.A72DF070@webaxs.net>
Source record: 62778

I think the blue ink in 'dalo' pcb resist pens is simply "engineers' bluing ink".
This stuff can be got in paint tins in some mechanics type shops.

> I recall seeing a thread on this topic some time ago-- for best results, one
> would need
> a waterproof ink that wets copper but withstands resist. The only flavor of
> plotter-pen
> ink I could locate contained toxic ingredients and was no longer sold in the
> U.S. Shortly
> after, we visited Toronto, and I called a bunch of graphics-supply houses, only
> to find
> that no one in Canada sold the ink, either. Maybe it's availabe in the U.K.?
>
--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

1787. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cbkvp.lmo.root@radioactivex.lebesque-al.net>
Source record: 62779
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8cau2g.kkc.root@radioactivex.lebesque-al.net>,
>
> Right. If the energy is stored over many cycles, then fast
> modulations will be washed out. That's what I'd expect.
> The time constant for flourescent materials is long compared
> to period of the waves involved. A resonant antenna would
> act as if the incoming waves "pump it up" over time.
>

Why? Flourescence occurs because the transitions from the
state emitting the light are inhibited from decaying but
are not the states excited by the incident radiation. If they
were the same state, from considerations of time-reversal, you
coupldn't populate the state faster than it decays. It occurs
from transitions like:

excitation

/ | fast transition to metastable state
/ --------
/ |
/ |
/ | slow transition
/ | inhibited by
------ -------- selection rules (J^pi, for example)
gs

There is no analogy in antenna. The resonance in an antenna means
X_C = C_L and the stored energy over a complete cycle is completely
determined by L and C.

>> In an amplifier, you would call the lack of
>> ability to change at the signal rate a slewing limitation.
>
> We're talking about the same thing, right? A high-Q tank
> circuit connected to an electrically small antenna? We
> shouldn't be suprised if it behaves differently than a simple
> 1/2-wave dipole. Because the tank circuit has high Q, won't
> it respond slowly to changes? If the incoming wavetrain

Because the tank has a large Q, it's losses through the internal
resistances of its elements is small. That doesn't allow it to
accumulate energy, since you have to connect to it to (1) attach
the antenna, (2) arrange for charge to go in and out if you want

to do anything. With nothing but the antenna attached, guess what
happens with the energy stored in the tank each cycle? Remember,
it's a reversible process.

> begins abruptly, how could the high-Q tank circuit instantly
> absorb enough energy to follow that leading edge of modulation?

By instantly, I assume you mean the velocity of the propagation
in the conductor, i.e., the frequency doesnt hit any anomalous
dispersion (this ought to be good to about 10^14 Hz). So, below
frequencies where speed of light violations would have to be
considered, it does happen "instantly" for all practical purposes.

Why is the peak large: Z = R, not jwl + 1/jwc + R, since wL = 1/wc
at resonance. Since V = iZ if you assume i is the same for any
frequency (in direct contrast to the "energy sucking" stuff),
you can only develop a potential difference as large as Z permits.

Plot Z vs w. At the resonance pt, w_0, tt will look real similar
to Q which is a plot of w_0 vs \delta w.

> AC voltage across the tank circuit change fairly slowly even
> though the modulation is fast? (Hmmm. If the tank circuit had
> infinite Q, maybe it would take infinite time for it to
> aquire any energy from the EM waves.)
>

I think you might be getting the idea except that instead of thinking
Q think "energy sucking idea". The process has to be totally
reversible.

> Raising the Q to enhance the "energy sucking" effect
> might be good for S/N ratio, but bad for bandwidth and
> audio fidelity of an AM signal.

That's another reason the "energy sucking" cant be right. Increasing
the signal to noise always increases the bandwidth provided the
encoding is optimal (an encoding which depends upon certain spectral
characteristics of the noise, may of course be worse off with a better
S/N that also changes those characteristics, but that's a pathological
case which resides with the coding scheme)

1788. Trade?: (1)Micor, (2)Motrac, (1)Pullsar for....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38c5ce3b.18798847@news.thegrid.net>
Source record: 62780
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Looking to trade:
1 Motorola Micor Tested Working W/ Control Head (Freuency Counter showed 800 mhz.)
1 Motorola Pulsar Tested Working W/ Control Head (Frequency Counter showed 150 mhz.)
2 Motorola Motracs Unknown Frequency Untested No Control Head

I was going to convert the 2 first ones for repeater use, but didnt want to attempt it in case I blow them up. So I will trade all 4 radios for a working Converted for Repeater use GE Master II or Motorola Micor on either 2 meters or 220mhz amateur bands ready to use, Controller Ready....

The Micor and Pulsar look in good shape and are working. The Motracs are ugly and untested because there is no control heads.

Here is the info for the radios:

Motorola Micor:
FCC XMTR DATA: CC5010
FCC RCVR DATA: RC0071
MODEL #: T45RTA6B00AA
SERIAL #: 439CDS1200

Motorola Pulsar
MODEL: T1776A
RCVR: RC0047
FCC TYPE: CC3225
SERIAL: RR6210

Motorola Motrac #1:
MODEL: U43HHT-11300
TRANS TYPE: CC3009
SERIAL#: E-14787

Motorola Motrac #2:
MODEL: T43MHT-1190C
TRANS TYPE: CC3059
CABLE TYPE: 2
SERIAL#: Not Visible

I would prefer a local trade (Redding, CA.) but will ship in the US.
If interested or have a question, Reply to cobra@no-spambudweiser.com
Be sure to remove "no-spam" from my e-mail address to reply.
Thanx

73,
kf6foz

The KF6FOZ BBS
Redding, CA.
530-229-0896

Visit my Website for other stuff and more info on
the BBS. Even a good list of Sale and Swap sites
on there.
http://www.qsl.net/kf6foz/main.htm

1789. Equipment For Sale<-------LQQK

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: radiodoc37@aol.com
Message-ID: <20000308003109.02587.00000767@ng-fs1.aol.com>
Source record: 62781

Yaesu FTDx560 HF Tube Transceiver 10-80 meters,
plastic still on faceplate, excellent condition-
with copy of manual $250.00 SOLD

Alinco DR110, 2 meter mobile, 45 Watts Good Condition $110.00

Siltronics Mdl 90 -6 VFO $70.00

Siltronics Mdl 90 -3 VFO $70.00

Turner Plus Three amplified Desk Mic, Grey Model $35.00

Shure 777S Slim Crystal Broadcast Microphone, Original box and accesories, With
Radio Shack Base and Goose Neck $90.00

Kenwood PB-18 HT Battery 7.2V 1100mAh, Like New in box hardly used $35.00

Kenwood PB-17 HT Battery, 12V 700mAh, Like New in Box hardly used $45.00

Kenwood PB-13 HT Battery, 7.2V 700 mAh, Untested $10.00

Kenwood PB-32 HT Battery, 6V 600mAh, Untested $10.00

Cobra CAM88 Tube CB Base, 23 Channel Working, No Mic but I have the Mic Plug
with it and copy of the SAMs. $65.00

Realistic Navaho TRC-30 Base, 23 channel, Works good $30.00

RT-524 30-76 Mhz Military FM transceiver, Good condition an 8 on a 1-10 scale,
No nomenclature tag (desirable for collectors) Replaced with Serial Tag.
Manuals and original mic. $500.00 See Fair Radio Catalog for more info. Their
Price $625.00-$675.00

Swan 1200W 10-80 Meter Amplifier, Very Clean Condition, Uses 4 6LQ6 Tubes
With Manual. $250.00 Obo Pic will be on the WebSite Soon! Will trade for a
Kenwood TS520. SOLD

Yaesu XF-32A SSB filter for FT101 series, $40.00

Tram D201 Parts, Wood End Caps, Meters, Crystal/selecter Board, Transformers,
Face Plate, Knobs, crystal filter, Etc... Inquire with your needs,.

Misc. 24V Switching power Supplies, Cosel, Power One Etc... Most new in the box

Crown IC-150 Stereo preamplifier, Metal cabinet
model with copy of manual $150.00 Obo

Midland 79-290, removeable face 10/11 meter AM/SSB/WX
Mobile,dual final design, 5 bands, WX, good condition with
stock mic. $110.00 Reduced!

Commercial VHF Handhelds:
Motorola Radius P50 (Weak Battery)
reasonable offer SOLD

Kenwood TK240 Commercial VHF Handheld with drop in charger, great battery, great condition.
Reasonable offer

Homebrew 3 tube 10 meter amplifier, uses 3 military versions of the 6146, Seperate open chassis PA and power supply deck. RF sensing, Plate Load, meter, SSB and AM. 150-200 watts with low drive $130.00 Reduced to $100.00

Misc. Vacuum tubes (No Sweeps right now) See WebSite

Kenwood TS430, with AM filter and FM board, Manuals, Clean and working Great $400.00 SOLD

Browning Mark III receiver, excellent condition $140.00

Browning Mark III Transmitters, Make one good one from the two units $110.00

The above Brownings can be seen on the website

Icom IC-230 with manual, mic and mobile bracket. not working correctly, VCO unlocks but in great cosmetic condition,, $30.00 Shipped

Browning Mark III Receiver, Browning Mark III AM Transmitter, Very Clean! and D104 Mic $250.00 Pic will be on the Website Soon !

Tram D201s, Both have unlocked VFO's, One has lower freqs with good AM and weak SSB the other has upper freqs with good AM and SSB. Both in good condition $250.00 Each

Penetrator HB-150 10/15/20/40 meter Mobile amplifier, 150 watts class AB1 Low drive input required, super clean! $150.00

Yamaha FG-460S-12S, 12 String Guitar, Beautiful guitar, near flawless, Gold hardware, Pearl inlay, Seymore Duncan Acoustic Pick-up, Hard Case $350.00

Hooker 10 meter Amplifier, 1 pill design, PEP and RMS mode, CW/AM/SSB, Preamplifer, Clean, still has factory seals $75.00

Pacifc Scientific / Superior Electric 2 Axis Servo System $250.00

Tram Diamond 60 AM/SSB Mobile, SIltronics Model 90 VFO -3 and Paradynamics Meter, All in good working condition $175.00

VHF Trielectric Amplifier 13.8 VDC As Is $40.00

Motorola UHF 13.8 VDC 450-470 Mhz Solid State Amplifier, clean!, Surplus, As Is $40.00

Alan K1313 10 meter Single Tube Modulator, 110 VAC, With Spare 6KG6 tube, New Russian tube installed, Spare is 90% or better, Clean and works Great! $150.00

Johnson Messenger 250 Base, With Original Box and Manual $75.00

Astatic 10DA Mic Head, Works and looks good, Missing the locking Ring but plugs right into a D104 Stand $30.00

Fentone 500C Studio dual crystal Mic Head On a TUG8 D104 Stand, Wired to a Demco Tube Modulator. Smooth Clear Audio! $200.00 Obo

Pentax K1000 35mm Camera, Wide and normal lens, 2x teleconverter. Cokin filter holder with flare guard. Several special effect Cokin Filters, polorizers and acessories, carrying case etc... $250.00 Obo

SBE Trinidad , 23 channel base CB, near perfect condition, original manual $70.00

Fluke 8050A Digital Desktop Multimeter, AC/Batt, needs new batt. but works great on AC $50.00

NF Circuit Design Block Model CR-116 Low Distortion Signal Generator, $125.00 Obo

Misc, Yaesu FT101 Components and parts, Misc untested boards, Email If you need something.

Electrovoice Mic.... See Website!

Misc 19" Racks..... Email for Details

Will Trade For Mustang 5.0 Parts Or Kenwood TS520

To see this Equipment and More equipment and Pics go to:

http://members.aol.com/radiodoc37/indexdoc.html

Modified components to build your own Rife-Bare
Resonant Frequency Therapy Machine, Modified
ISM transmitter, Modified Class C amplifiers,
And a variety of Plasma Tubes. Built and tested
systems available.
To Learn about Plasma Wave Therapy See My site:

http://www.medicineofthefuture.com

All items shipped UPS ground after reciept
of MO Or cleared Ca. Check.
Thanks
Mike N6KYD (805) 526-5487

1790. HAMFEST - INDOOR HAMFEST - HAMFEST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Paul & Cindy Loiero <kissn1fi@javanet.com>
Message-ID: <38C5EAAC.713C61D1@javanet.com>
Source record: 62782

Less than 1 WEEK away... Weather forecasted to be good.
MARK YOUR CALENDAR THE LARGEST INDOOR HAMFEST IN WESTERN NEW ENGLAND -
the Mount Tom Amateur Repeater Assoc. 15th Annual
Hamfest/Flea Market will be held on SUNDAY, MARCH 12, 2000 at the
Blessed Sacrament Parish Center, 127 Holyoke Road, Westfield
Massachusetts. Doors open at 7:00 AM for Vendors, 9:00 AM for Bargain
Hunters. Tables $15, Tailgating $5. General admission $4 per person,
under age 12 FREE. Amateur and commercial licensing sessions at 10:00
AM ----- Talk-in on the 146.94 W1TOM repeater. Snack Bar, Handicapped
Parking, Raffle prizes, NO Stairs, 120 VAC available, help loading and
unloading!!! For more info, contact Cindy, K1ISS at (413)568-1175 or
kissn1fi@javanet.com . Visit our web site at www.mtara.org

1791. noise suppressor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Hartono Sudja <hsudja@cbn.net.id>
Message-ID: <38c6d5d2.0@news.cbn.net.id>
Source record: 62783

Anybody know how to suppress noise generated from my KENWOOD MC-65 mic compressor in my car KENWOOD TM-241SQ.
I am very sure the noise is not from my RIG, It was no noise before I use MC-65.
My car is TOYOTA with diesel engine.
Appreciate your help
Thanks
Hartono Sudja, YD0KOR

1792. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <eAnx4.16604$84.505168@elnws01>
Source record: 62784
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <8a2ova$f7k$1@nnrp1.deja.com>...
>In article <38C4A0A7.B7105A05@ieee.org>,
> Roy McCammon <rbmccammon@ieee.org> wrote:
>> Science Hobbyist wrote:

>> > That's why I keep saying that the FIELDS of the electrically
>> > short antenna are reaching out and grabbing EM waves.
>>
>> I think I'd say that the currents and charge distributions
>> in the antenna distort the field from what it would be
>> if the antenna were not there.
>
> OK, but it is not obvious that a current alone can "draw in"
> the energy of an EM wave. Thinking in terms of the field
> produced by that antenna current helps explain what's going
> on. It takes some of the mystery out of the "nearfield"
> stuff. The Bohren paper has a diagram where the dipolar
> e-field of a tiny antenna is added to the e-field of
> incoming plane EM waves, and when the Poynting vector is
> plotted (it's perpendicular to the distorted field lines)
> it proves to deflect inwards and dive into the tiny antenna.
> Very weird.

Look at the ubiquitous roof-top log-periodic TV antenna, you notice (for a 3 element anyways) a short dipole called a director, the receiving dipole that's 1/2 wave, and behind a long dipole called a reflector. The electricaly short dipole is capacitively reactive at the receiving frequency and bends radio waves into the receiving dipole. Behind the long reflector dipole acts inductive, and reflects energy back into the receiving dipole, which is purely resistive at the receiving frequency.

Nothing weird here. A constant phase shift occurs, reactance, when the dipole is long or short compared to the wavelength. It 'bends' or 'reflects' because the element is not loaded so it re-radiates energy. The superposition of the incident and radiated energy is what refracts or reflects. A field is required for this action.

But this is not the same as 'flux sucking'.

An atom has highly charged electrons or dipole moments. The electrons are mobile. When a photon's EM field is present, the electron and its charge and dipole moment move in the field to cancel it, and absorb the energy ending the photon if the electron gets stuck in a higher orbit, or re-radiating with a time delay when it falls to a lower orbit if the material is transparent. In high permiability and permitivity ceramics, the dipole

moment of the molecules are physicaly stressed by ambient flux and cancel it by displacing and concentrating the flux as stress in the ceramic.

An antenna is fixed and static. Currents only flow where conductors are. If you had an antenna that had a high static charge and magnetic moment, and was fluid, and virtualy massless, so it could re-configure itself in response to changes in an incident field, you would have an interesting antenna indeed.

Scott

1793. Re: UV Light Boxes for PCB's ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: 123 <yano@home.com>
Message-ID: <keox4.13500$_e7.552380@news1.sshe1.sk.home.com>
Source record: 62785

Colin Lowe wrote in message <89vmb0$n33$1@lola.ctv.es>...
>I am looking for plans for a UV light box for making homebrew PCB's.
>
>If you have any plans or links to WWW pages please reply.
>
>73 de Colin
>
>Just replace the flourescent lamp with a germicidal tube, the real trick is the 15 to 35 dollar price tag for the tube !!! the only real difference is the Quartz glass envelope instead of lime glass and no phosphor coating NB. this is not the Black Light Tube with a phosphor coating that glows at about 360 millimicrons !!! the Germicidal lamp is a low pressure mercury glow discharge that has a very strong line at 254 milimicrons and will cook your eyeballs at a normall working distance in about five minutes, but will not be obvious for an hour or two, feels like a very bad sunburn, only its is your eyes! that are burned. General Electric used to supply these lamps fourty years ago for Sterile rooms , this was before Laminar Flow Hoods became popular. this is the same lamp used for UV Eprom erasing, about 15 minutes at a distance of 1 or 2 inches from the tube. just keep the lamp covered with cardboard or metal to protect the eyes, short exposure to the bare lamp should be limited to ten seconds or less. you might try UV products, California for a web page ?

Yukio Yano VE5 YS

1794. WTB 5V 30A filament transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38C613D2.B25967D3@pa.net>
Source record: 62786

Hi,
I am looking for a filament transformer for a 3CX1000A7. If
you have one please contact me by email.
Tnx,
Art

1795. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: rnh@gmrc.gecm.com
Message-ID: <8a5do9$g5d$2@miranda.gmrc.gecm.com>
Source record: 62787
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <eAnx4.16603$84.505168@elnws01>, Scott Stephens (Scott2@Mediaone.net) wrote:

> Bilge wrote in message ...
> >
> > >On Sat, 04 Mar 2000 00:26:02 GMT, Science Hobbyist <bbeaty@microscan.com>
> wrote:
> >
> > >I'm certain that fields (photons) can only be altered due to the
> > >mediation of charged matter. Other fields alone cannot alter them.
> >
> > Yes, but it seems the statement needs to be repeated, and often.
> > So continue to throw it in, prn.

> Did you know photons have a magnetic moment?

Really? What's its value? How did you measure it?

> That circular polarized laser beams attract? ;-)

Photon-photon interactions are a second-order effect in QED.
In the low-energy regime of this discussion, they can safely be
neglected.

> > >Interference patterns are simple superposition. The Principle of
> > >Superposition says that the components of a superposition are
> > >*unaltered* by the superposition. Beyond the superposition zone
> > >we still have the same two waves, still with the same directions
> > >and the same energies as they had before the superposition
> > >occurred.

> Solitons can do strange things, see http://www.sfu.ca/~renns/lbullets.html

In a nonlinear dispersive medium, certainly. But it's the
constitutive relation of the medium which produces the effect,
not any innate property of photons. In free space, superposition
still holds (apart from that 2nd-order QED caveat.)

--
Richard Herring | <richard.herring@gecm.com>

1796. TEK-Plug_in PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38C655C4.681750D1@lafn.org>
Source record: 62788

Need TEKTRONIX historians to help with this.
I am not certain such a product exists.
But it would be a helpful accessory.

I want to buy a cabinet with power supplies
that will accept TEK plug-in Verical Amps such as 7A19, etc. for 500,
5000 or 7000 TEK Scopes. This would be the equivalent of a TM501
but for the TEK 500, 5000 and 7000 accessories. The 7A19 could then
be operated as a standalone accessory without the scope mainframe,
output buffered, and fed to 50 ohm frequency counter, etc.

Do not know the model/part number.
Any hints will be gratefully accepted.
Thank you. 73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1797. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38C67795.40C8BEDE@mmm.com>
Source record: 62789
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> Which leads me to wonder: don't halfwave dipoles also
> generate their own fields?

If there are currents in the dipole, then those currents
contribute to the (one) field.

> OK, but it is not obvious that a current alone can "draw in"
> the energy of an EM wave.

more oneness: currents and fields arise together.

> Thinking in terms of the field
> produced by that antenna current helps explain what's going
> on.

I have to agree with that.

> It takes some of the mystery out of the "nearfield"
> stuff. The Bohren paper has a diagram where the dipolar
> e-field of a tiny antenna is added to the e-field of
> incoming plane EM waves, and when the Poynting vector is
> plotted (it's perpendicular to the distorted field lines)
> it proves to deflect inwards and dive into the tiny antenna.
> Very weird.

Well, from the field theory point of view, it isn't
weird, it is necessary.

>
> > I'd say it was true for independent waves. But what is
> > different here is that the field component from the antenna
> > currents is dependent on the component from the far away
> > sources.
>
> Not totally true in the case of the resonant antenna. Yes,
> the stored energy in the resonator did originally come from
> the incoming EM waves. However, it built up over many
> cycles. If the incoming wavetrain was to suddenly come
> to an end, then the oscillating fields produced by the
> small antenna's LC circuit would continue. (The antenna
> is too small to radiate much energy.)

The concept of dependence is readily extended for this.
You simply note that a transmitter that is switched on

and later switched off does not produce a single frequency
but rather produces a band of frequencies. The transient
response of the LC circuit is accounted for by the relative
phase
of those constituent frequencies. It doesn't really matter
in this case, since we can confine the discussion to the
steady state.

> The antenna's
> fields are not created by the incoming EM waves, instant
> by instant,

it only takes a little Fourier math to put it into
that framework.

> My previous reply was to Mr. Coffman, who insisted that
> an AC EM field could not deflect the Pointing vector of an
> EM wave (and therefore I am wrong about the ability of
> these tiny antennas to deflect EM energy into themselves.)

Again, it is wording. One field doesn't deflect another.
There is only one field and it deflects.

> > I think its just the way you tell it.
>
> Right! I'm speaking in clear terms, yet they are
> unconventional, so everyone seems to have objections.

You can use the word "spoon" to talk about a fork,
and if you don't realize that your are using a different
definition and we don't realize it also, its likely
that we would disagree and how a spoon works.

> Yet there is nothing wrong with my terminology, except
> that it is non-traditional.

Except that you are talking to people who use traditional
terminology.

> Yeah! And circuits connect with antennas in the realm of
> AC motors. ...

yes, Poynting vector approach applies to all

> Overall idea: take a standard receiving antenna, realize
> that the antenna currents generate their own fields, then
> conceptually shrink that antenna while adding some circuitry
> which keeps its field pattern strong at a 1/4-wave distance.
> You can shrink the antenna to any small size, yet if the
> antenna-generated field remains large, the received power
> will not decrease much. AM radio antennas the size of
> large molecules become possible, at least in theory. A
> desktop longwave antenna with the electrical size of a
> broadcasting tower becomes possible (although

> superconducting materials are probably required.)

The reciprocal problem is easier to work. The mutual
inductance from a transmitter to a receiver is the same as
from the receiver to the transmitter. Let the
far away transmitter become a far away receiver. Let
the short dipole be a transmitter. It is trivial that if
the antenna is lossless and the matching components are
lossless that the antenna is 100% efficient, no matter
how small it is. Furthermore, the field from a dipole
of 0.01 wavelength is virtually the same as the field
from a 0.001 wavelength dipole. So, for the same power
in, I get the same signal at the far away receiver.

So, given lossless antenna materials and lossless
matching networks, all short dipoles are equal.

But to to consider some practical details, as our dipole
gets small, it gets thinner than skin depth. The resistance
at signal freq is the same as the dc resistance. As we
scale
the dipole down by a factor of 2, its length decreases by
two
and its cross section by 4 so that the dc resistance goes
up by 2. But, the radiation resistance goes down by a
factor
of four. At some point, it becomes very lossy.

Opinions expressed herein are my own and may not represent those of my employer.

1798. Re: VFO Stabilizer/counter PLL board code

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38c67b64.14923599@news.m.iinet.net.au>
Source record: 62790

On Tue, 07 Mar 2000 22:55:48 GMT, LA8AK@online.no (J M Noeding) wrote:

>On Tue, 07 Mar 2000 04:18:00 GMT, richardh@iinet.net.au (Richard
>Hosking) wrote:
>
>>
>>I have updated the website with source code for these borads
>>I have not yet completed the article for the PLL controller
>>(soon)
>>Boards and programmed controllers for the VFO stabiulizer are
>>available
>>
>>I would be interested in comments on the code
>>
>>
>>Richard
>
>and the URL is....?
>
>JM
Sorry Guys

http://www.iinet.net.au/~richardh/VK6BRO.htm

1799. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38C67BF4.AF95D45F@mmm.com>
Source record: 62791
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:
> The antenna's
> fields are not created by the incoming EM waves, instant
> by instant, and it is conceivable that they could be
> created by a power supply with the goal of increasing the
> antenna's effective size, as Sutton and Spaniol did in
> their active ELF antenna (papers referenced at the end
> of http://www.amasci.com/tesla/tesceive.html)

I haven't read the paper, but I suspect that they put
more power into it than they pulled out of the incoming
wave.

>
> > My objection is one of emphasis. The way you have told it,
> > it sounds to me like you consider the source fields and the
> > antenna field to be two separate fields.
>
> But they are,

As I let the water out of my bath tub, I notice that there
there is a depression in the water level over the drain.
The
depression is really there and it is interesting and
deserves
some study, but I don't tend to think of that depression as
sucking water out of the tub and shoving it down the drain.
To me, your description of energy sucking sounds backward
in a similar sense.

But, consider this (I think you will like it).

If I wind a coil on a torroidal form and energize it
sinusoidal, and if I do an idea job, there is no
H or B field outside of the torroid. There is E, but no
H or B. I then run a wire down the middle and
connect the ends to a resister. I have made a
transformer. The resister absords power. But how can
the Poynting vector be non zero it there is no H or
B from the primary current? Easy, it comes from the
secondary current. So here is a case where the E
component of the field is attributed to source
currents and the H component is attributed to the
load current. And it works fine.

Why? Because there is only one field and Poynting
says P = E cross H. It doesn't say P = Esource cross
Hsource.

Opinions expressed herein are my own and may not represent those of my employer.

1800. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8a64u0$b8$1@slb1.atl.mindspring.net>
Source record: 62792
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

In article <38C40E4C.3ECF527E@clifto.com>,
Clifton T. Sharp Jr. <clifto@clifto.com> wrote:
>Mark Zenier wrote:
>> Yes it it. Signetics has been owed by Philips since the early 1970's.
>
>Apparently not: <http://www.signetics.com/doc/history.html>

Are you quibbling about the use of the name by Signetics Korea, a spun
off company that operates as a subcontrator for packaging and testing ICs,
or that 1975 is to be considered mid rather than "early 1970's"?

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1801. Re: UV Light Boxes for PCB's ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38C69DD4.AB693ABE@agilent.com>
Source record: 62793

Have a look at:

http://www.thinktink.com/index.htm

There's a lot of stuff there on serious PC board prototyping, including instructions for making a good light box. (From the index page, select "go to page..." --> "Make your own gear," or just start directly at that page: http://www.thinktink.com/stack/volumes/voliii/homespun.htm)

There's also a page on the chemistry, care and feeding of a cupric chloride etch bath on http://www.dnai.com/~rexa/Projects/CuCl_ech.html, FWIW.

Cheers,
Tom

Colin Lowe wrote:
>
> I am looking for plans for a UV light box for making homebrew PCB's.
>
> If you have any plans or links to WWW pages please reply.
>
> 73 de Colin

1802. WTB: Tektronix 2445 Oscilloscope Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-08 00:00:00 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <5zxx4.12981$vd7.777716@bgtnsc04-news.ops.worldnet.att.net>
Source record: 62794

I am looking for a junker Tektronix 2445 Oscilloscope, or just the power supply/regulator board, with the cooling fan, (the fan and the fan circuit board is a MUST!!!).

Please e-mail price to:

fallen-idc@worldnet.att.net

1803. Re: PC BOARD LAYOUT PROGRAM FOR WINDOWS 95?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a98rq$pt4$1@newsg3.svr.pol.co.uk>
Source record: 62645

I use a UK product called Proteus with great success (labcenter.co.uk) they
have a Lite version you can download and try.
G3LBA
Richard Wilkes <rwilkes@gte.net> wrote in message
news:5lwt4.257$395.4385@dfiatx1-snr1.gtei.net...
> Does anyone have any experience with the new version of Electronic Work
> bench Ultiroute or Multisim?
>
> The software is rather expensive but it appears to be very powerful
package.
> I am considering purchasing their student versions of Ultiroute and
> Multisim. These programs are $100 each.
>
> Rich
> KE4BXZ
>
>
>
>
>
>
>
>
>
> "Carl R. Stevenson" <wa6vse@fast.net> wrote in message
> news:sahr7ace2pd91@corp.supernews.com...
> > -----BEGIN PGP SIGNED MESSAGE-----
> > Hash: SHA1
> >
> > "Michael D. Harmon" <mharmon@tranquility.net> wrote in message
> > news:38A8D57B.DF4C7011@tranquility.net...
> > > Ed,
> > >
> > > Check out the following site:
> > >
> > > http://www.ivex.com/
> > >
> > > They have a schematic capture (drafting) program called WinDraft and a
> PCB
> > > layout program called WinBoard which are free for download. The only
> > catch
> > > is that they are limited to 100 pins (each). You can buy additional
pin
> > > capacity if you need it.

> >
> > Better yet, checkout Eagle (from CadSoft) Light at
> > http://www.cadsoftusa.com/freeware.htm
> >
> > Freeware
> > The EAGLE 3.5 Light Edition can be used for free!
> > Limitations
> > The following limitations apply to the EAGLE Light Edition in general:
> > The useable board area is limited to 100 x 80 mm (4 x 3.2 inches).
> > Only two signal layers can be used (Top and Bottom).
> > The schematic editor can only create one sheet.
> > Apart from these three limitiations the EAGLE Light Edition can do
> > anything the Professional Edition can do. You can even load, view
> > and print drawings that exceed these limits!
> > The Freeware version of EAGLE Light adds these limitations:
> > Support is only available via email or through our forum (no fax
> > or phone support).
> > Use is limited to non-profit applications or evaluation purposes.
> > What does "non-profit" mean?
> > The definition of non-profit is fairly simple and straightforward:
> > If you earn money by using the Freeware version of EAGLE Light,
> > you have to register it.
> > This allows anybody who wishes to use EAGLE Light for their
> > private hobby projects to do so. Also students can use this version
> > for any educational projects. It is even ok to use this version in a
> > commercial environment, as long as you just want to evaluate the
> > program. As soon as you start using it for commercial projects, you
> > will have to register it.
> >
> > I am NOT affiliated with CadSoft in any way beyond being a
> > satisfied customer for their professional version ...
> >
> >
> > - --
> > Carl R. Stevenson - wa6vse
> > <mailto:wa6vse@fast/net>
> > <http://www.users.fast.net/~wa6vse>
> > - ---
> > NCI-1052
> > Executive Director, No Code International
> > Fellow, The Radio Club of America
> > Senior Member, IEEE
> > Member, TAPR
> > Member, ARRL
> > - ---
> > Join No Code International! Hams for the 21st Century.
> > Help assure the survival and prosperity of ham radio.
> > <http://www.nocode.org>
> >
> >

```
> > -----BEGIN PGP SIGNATURE-----
> > Version: PGP for Personal Privacy 5.5.3
> >
> > iQA/AwUBOKjs2pe+N6+q84HiEQLIwwCePGSQVb8xCgzuS/Fl3uvm5UzFwo0AoISd
> > Xtm8ZwLOsfIqgzhuPdPfNo0J
> > =CHN3
> > -----END PGP SIGNATURE-----
> >
> >
> >
>
>
```

1804. Re: 2SC1945 - equivalent please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Nick <nrw7@go.away.yahoo.com>
Message-ID: <18bgcssjrfov5e7lfmn9ts1nvrk65hclp4@4ax.com>
Source record: 62646
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Taken from ECA equivalents book:-

AM power, 80V, 6A, 16W(27MHz) pinouts if you want ? Equiv=2SC3133
--

7 3 for now, Nick G7COC

g7coc at nrw
.
clara dot net

Also occasionally @ GB7CYM

www.nrw.clara.co.uk

-On Thu, 9 Mar 2000 13:28:55 -0000, it was observed that "Robin Birch"
<robin.birch@postoffice.co.uk> said in message
<952608491.328429@igateway.postoffice.co.uk>:

-Dear All,
-Can someone give me an equivalent - 2N or BC for this?
-
-Regards
-
-Robin
-

1805. Re: 2SC1945 - equivalent please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Marvin Born <mborn@wbns.com>
Message-ID: <38C843BD.7B66A66A@wbns.com>
Source record: 62647
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

The 2SC1945 crosses to a NTE 236 it is a TO-220 case however
the lead configuration may be difference than a 2SC1945.

Let me know if you need the specs. I have them in the book.

NTE has a US number of 1 800 631 1250
201 748 5089
FAX is 201 748 6224

You may be refered to a dealer who will have to order this. I
used one of these in my ham rig once until I got the real thing.

K8XU

Robin Birch wrote:

> Dear All,
> Can someone give me an equivalent - 2N or BC for this?
>
> Regards
>
> Robin

1806. Question about replacing battery pack for HTX-202

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Michael1998@webtv.net
Message-ID: <11790-38C85C2C-14@storefull-131.iap.bryant.webtv.net>
Source record: 62648

I have a Ni-Cd battery pack for an HTX-202 that I am trying to replace. Does anyone know where I may buy a replacement battery pack for the radio. I don't want to replace the whole rechargeable battery itself, I just need the Ni-Cd pack inside the case that has the four wires coming off of it that can be soldered into the battery assembly. On the battery pack, it says 600 mAh 7.2 Volts, and the maufacturer is a company called Saft. If anyone knows where I may find a replacement pack for the radio, please e-mail me directly. Thanks a lot!

Michael Brown KU4UV

1807. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <UV9y4.16896$84.527660@elnws01>
Source record: 62649
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <8a7565$m44$1@nnrp1.deja.com>...
>In article <eAnx4.16604$84.505168@elnws01>,
> "Scott Stephens" <Scott2@Mediaone.net> wrote:
>
>> electricaly short dipole is capacitively reactive at the receiving
>frequency
>> and bends radio waves into the receiving dipole. Behind the long
>reflector
>> dipole acts inductive, and reflects energy back into the receiving
>dipole,
>> which is purely resistive at the receiving frequency.
>>
>> Nothing weird here.

I mean not weird in that linear superpostion of the vacuum is not affected.

> If that's not weird, then "energy sucking" isn't so weird
> either, in my opinion. If the induced V and I on the
> director element causes energy to be "lensed" towards
> the active element, and if the fields generated by the
> director are the cause...

> then if this whole process
> could be performed by a single object (being director
> and receiver simultaneously), then we'd have an
> "energy sucking" device.

True. What single device can simultaneously generate a complementary field to an incident wave and absorb it too? It must occur with highly reactive elements in a near-field, because it will radiate power (by definition) in the far field.

Scott

1808. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <38c6ed14.17870044@news.mcn.org>
Source record: 62708
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

A watt meter and dummy load just isn't going to cut the mustard....

I suggest you wait for your friend and is analyser.

Danny, K6MHE

On Wed, 08 Mar 2000 16:31:52 -0600, WebMonkey
<webmonkey@mad.scientist.com> wrote:

>i've gotten a uhf duplexer [celwave 633-6a 1n] and would like
>to tune this with an exciter, wattmeter, and dummy load.
>i've been led to believe this is possible if not entirely accurate.
>a fellow ham will be able to do the spectrum analyser thing
>on it in a few weeks but would like to get this thing in the
>loop before that.
>
>any ideas where everything goes =]
>
>3 n connectors for the common rx and tx.
>thanks for your time

1809. (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: jared@cyberport.NET
Message-ID: <005501bf8933$fafa2c60$a67aa8d0@jared>
Source record: 62709
Body handling: HTML body converted to readable text

This is a multi-part message in MIME format.

------=_NextPart_000_0041_01BF8933.E7240C60

charset="iso-8859-1"

Make Easy Money! Earn Over $10000 in weeks!

Just follow these simple instructions!

LOTS OF CASH, FAST - THIS IS A MAILING LIST PROGRAM -AND COMPLETELY =
LEGAL, THIS REALLY WORKS!! THIS REALLY CAN MAKE YOU EASY MONEY!!IT =
WORKS!!BUT YOU HAVE TO FOLLOW THIS LETTER FOR IT TO WORK!!!! A little =
while back, I was browsing through news groups, just like you are =
now,and came across an article similar to this that said you could make =
thousands of dollars within weeks with only an initial investment of =
6.00!So I thought,"Yeah ,right,this must be a scam", but like most of =
us, I was curious, so I kept reading. Anyway,it said that you send =
$1.00to each of the 6 names and address stated in the article. You then =
place your own name and address in the bottom of the list at #6, and =
post the article in at least 200 news groups.(There are thousands) No =
catch,that was it.So after thinking it over, and talking to a few people =
first,I thought about trying it. I figured what have I got to loose =
except 6 stamps and $6.00, right?Like most of us I was a little =
skeptical and worried about the legal aspects of it all.So I checked it =
out with the U.S. Post Office (1-800-725-2161) and they confirmed it was =
indeed legal! Then I invested the measly $6.00. Well GUESS =
WHAT!!...within 7 days,I started getting money in the mail ! I was =
shocked! I figured it would end soon,but the money just kept coming in. =
In my first, week I made about $25.00. By the end of the second week I =
had made a total of over $1,000.00! In the third week I had over =
$10,000.00 and it's still growing.This is now my fourth week and I have =
made a total of just over $42,000.00 and it is still coming in =
rapidly.It's certainly worth $6.00 and 6 stamps.Let me tell you how this =
works and most importantly, why it works...also make sure you print a =
copy of this article NOW,so you can get information off of it as you =
need it. Believe me, it does work!!
STEP 1:=20
Get 6 separate pieces of paper and write the following on each piece of =
paper"PLEASE PUT ME ON YOUR MAILING LIST".Now get 6 US $1.00 bills and =
place ONE inside each pieces of paper so the bill will not be seen =
through the envelope to prevent thievery. Next, place one paper in each =
of the 6 envelopes and seal them.Now,you should have 6 sealed =
envelopes,each with a piece of paper stating the above phrase,your name =
and address,and a $1.00 bill. What you are doing is creating a service =

by this. THIS IS ABSOLUTELY LEGAL! Mail the 6 envelopes to the following =
addresses:=20

#1) S.Bassett RR#1 Cannington,
Ontario,
Canada LOE 1EO=20

#2) Sharon=20
32 Sleepy Hollow LN,
Sicklerville,
NJ 08081=20

#3) Justin=20
3707 Crenna Ave.Concord,
CA 94519=20

#4) Chicollla=20
2 Oxford Mews,=20
Poquoson=20
VA 23662

#5)E. S.K. Law=20
30 Morewood Crescent,=20
Toronto, Ontario,=20
Canada M2K 1L7.

#6) Johny=20

2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of the states)

STEP 2 :=20
Now take the #1 name off the list that you see above, move the other =
names up (6 becomes 5, 5 becomes 4, 4 becomes 3, etc.) add YOUR name as =
number 6 on the list.

STEP 3 :=20
Change anything you need to, but try to keep this article as close to =
original as possible.Now, post your amended article to at least 200 news =
groups. (I think there are close to 24,000 groups.) All you need is 200, =
but remember , the more you post the more money you =
make!---DIRECTIONS---HOW TO POST TO NEWS
GROUPS---=20
STEP 1) You don't need to re-type this entire letter to do your own =
posting. Simply put your cursor at the beginning of this letter and drag =
your cursor to the bottom of this document,and select 'copy' from the =
edit menu. This will copy the entire letter into the computers memory.=20
STEP 2) Open a blank "notepad" file under accessories in windows and =
place your cursor at the top of the blank page.From the 'edit' menu =
select 'paste'.This will paste a copy of the letter into notepad so that =

you can add your name to the list.
STEP 3) Save your new notepad file as a .txt file.If you want to do your =
in different sittings, you will always have this file to go back to.=20
STEP 4)Use Netscape or Internet explorer and try searching for various =
newsgroups (on-line forums, message boards, chat sites, discussions.)
STEP 5) Visit message boards and post this article as a new message by =
highlighting the text of this letter and selecting paste from the edit =
menu. Fill in the Subject,this will be the header everyone sees as then =
scroll through the list of postings in a particular group!**REMEMBER,THE =
MORE NEWSGROUPS YOU POST IN,THE MORE MONEY YOU WILL MAKE!! BUT YOU HAVE =
TO POST A MINIMUM OF 200**=20

That's it ! You will begin receiving money from around the world within =
days. You may eventually want to rent a P.O. Box due to the large amount =
of mail you will receive.If you wish to stay anonymous,you can invent a =
name to use, as long as the postman will deliver it. **JUST MAKE SURE =
ALL THE ADDRESSES ARE CORRECT.** Now the WHY part: Out of the 200 =
postings say I only receive 5 replies (a very low example). So then I =
made $5.00 with my name at #6 Now,each of the 5 persons who just sent me =
$1.00 make the MINIMUM 200 postings,each with my name at #5 and only 5 =
persons to each of the original 5, that is another $25.00 for me,now =
those 25 each make 200 MINIMUM posts with my name at #4 and only 5 =
replies each,I will bring in an additional $125.00! Now, those125 =
persons turn around and post the MINIMUM 200 with my name as #3 and I =
only receive 5 replies each,I will make an additional $625.00! OK,now =
here is the fun part,each one of those 625 persons post a MINIMUM of 200 =
letters with my name at #2 and they only receive 5 replies,that just =
made me $3,125.00!!! Those 3,125 persons will deliver this message to =
200 news groups with my name at #1 and if still 5 persons per 200 news =
groups react I will receive $15,625.00! With the original investment of =
only $6.00! AMAZING! When your name is no longer on the list, you just =
take the latest posting in the news groups and send out another $6.00 to =
names on the list, putting your name at number 6 again. And start =
posting again.The thing to remember is, do you realize that thousands of =
people all over the world are joining the internet and reading these =
articles, everday,JUST LIKE YOU ARE NOW!! So can you afford $6.00 and =
see if it really works?? I think so ... People have said,"What if the =
plan is played out and no one sends you the money? So what! What are the =
chances of that happening when there are tons of new honest users and =
new honest users who are joining the internet and newsgroups every day =
and are willing to give it a try? Estimates are at 20,000 to 50,000 new =
users,every day ,with thousands of those joining the actual internet. =
Remember,play FAIRLY and HONESTLY and this will work.=20

------=_NextPart_000_0041_01BF8933.E7240C60

charset="iso-8859-1"

Make Easy Money! Earn Over $10000 in weeks!

Just follow these simple instructions!

LOTS OF CASH, FAST - THIS IS A MAILING LIST PROGRAM -AND COMPLETELY =
LEGAL,=20
THIS REALLY WORKS!! THIS REALLY CAN MAKE YOU EASY MONEY!!IT WORKS!!BUT =
YOU HAVE=20
TO FOLLOW THIS LETTER FOR IT TO WORK!!!! A little while back, I was =
browsing=20
through news groups, just like you are now,and came across an article =
similar to=20
this that said you could make thousands of dollars within weeks with =
only an=20
initial investment of 6.00!So I thought,"Yeah ,right,this must be a =
scam", but=20
like most of us, I was curious, so I kept reading. Anyway,it said that =
you send=20
$1.00to each of the 6 names and address stated in the article. You then =
place=20
your own name and address in the bottom of the list at #6, and post the =
article=20
in at least 200 news groups.(There are thousands) No catch,that was =
it.So after=20
thinking it over, and talking to a few people first,I thought about =
trying it. I=20
figured what have I got to loose except 6 stamps and $6.00, right?Like =
most of=20
us I was a little skeptical and worried about the legal aspects of it =
all.So I=20
checked it out with the U.S. Post Office (1-800-725-2161) and they =
confirmed it=20
was indeed legal! Then I invested the measly $6.00. Well GUESS =
WHAT!!...within 7=20
days,I started getting money in the mail ! I was shocked! I figured it =
would end=20
soon,but the money just kept coming in. In my first, week I made about =
$25.00.=20
By the end of the second week I had made a total of over $1,000.00! In =
the third=20
week I had over $10,000.00 and it's still growing.This is now my fourth =
week and=20
I have made a total of just over $42,000.00 and it is still coming in=20
rapidly.It's certainly worth $6.00 and 6 stamps.Let me tell you how this =
works=20
and most importantly, why it works...also make sure you print a copy of =
this=20
article NOW,so you can get information off of it as you need it. Believe =
me, it=20
does work!!
STEP 1:
Get 6 separate pieces of paper and write the=20
following on each piece of paper"PLEASE PUT ME ON YOUR MAILING LIST".Now =
get 6=20
US $1.00 bills and place ONE inside each pieces of paper so the bill =

will not be=20
seen through the envelope to prevent thievery. Next, place one paper in =
each of=20
the 6 envelopes and seal them.Now,you should have 6 sealed =
envelopes,each with a=20
piece of paper stating the above phrase,your name and address,and a =
$1.00 bill.=20
What you are doing is creating a service by this. THIS IS ABSOLUTELY =
LEGAL! Mail=20
the 6 envelopes to the following addresses:

#1) S.Bassett =
RR#1=20
Cannington,
Ontario,
Canada LOE 1EO

#2) Sharon
32 =
Sleepy=20
Hollow LN,
Sicklerville,
NJ 08081

#3) Justin
3707 =
Crenna=20
Ave.Concord,
CA 94519

#4) Chicollla
2 Oxford Mews, =

Poquoson=20

VA 23662

#5)E. S.K. Law
30 Morewood Crescent, =

Toronto,=20
Ontario,
Canada M2K 1L7.

#6) Johny

2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of=20
the states)

STEP 2 :
Now take the #1 name off the list that you see above, =
move the=20
other names up (6 becomes 5, 5 becomes 4, 4 becomes 3, etc.) add YOUR =
name as=20
number 6 on the list.

STEP 3 :
Change anything you need to, =
but try=20
to keep this article as close to original as possible.Now, post your =
amended=20
article to at least 200 news groups. (I think there are close to 24,000 =
groups.)=20
All you need is 200, but remember , the more you post the more money you =

make!---DIRECTIONS---HOW TO POST TO NEWS
GROUPS---
STEP 1) You =
don't need=20
to re-type this entire letter to do your own posting. Simply put your =
cursor at=20
the beginning of this letter and drag your cursor to the bottom of this=20
document,and select 'copy' from the edit menu. This will copy the entire =
letter=20
into the computers memory.
STEP 2) Open a blank "notepad" file under =

accessories in windows and place your cursor at the top of the blank =
page.From=20
the 'edit' menu select 'paste'.This will paste a copy of the letter into =
notepad=20
so that you can add your name to the list.
STEP 3) Save your new =
notepad file=20
as a .txt file.If you want to do your in different sittings, you will =
always=20
have this file to go back to.
STEP 4)Use Netscape or Internet =
explorer and=20
try searching for various newsgroups (on-line forums, message boards, =
chat=20
sites, discussions.)
STEP 5) Visit message boards and post this =
article as a=20
new message by highlighting the text of this letter and selecting paste =
from the=20
edit menu. Fill in the Subject,this will be the header everyone sees as =
then=20
scroll through the list of postings in a particular group!**REMEMBER,THE =
MORE=20
NEWSGROUPS YOU POST IN,THE MORE MONEY YOU WILL MAKE!! BUT YOU HAVE TO =

POST A=20
MINIMUM OF 200**

That's it ! You will begin receiving money from =
around=20
the world within days. You may eventually want to rent a P.O. Box due to =
the=20
large amount of mail you will receive.If you wish to stay anonymous,you =
can=20
invent a name to use, as long as the postman will deliver it. **JUST =
MAKE SURE=20
ALL THE ADDRESSES ARE CORRECT.** Now the WHY part: Out of the 200 =
postings say I=20
only receive 5 replies (a very low example). So then I made $5.00 with =
my name=20
at #6 Now,each of the 5 persons who just sent me $1.00 make the MINIMUM =
200=20
postings,each with my name at #5 and only 5 persons to each of the =
original 5,=20
that is another $25.00 for me,now those 25 each make 200 MINIMUM posts =
with my=20
name at #4 and only 5 replies each,I will bring in an additional =
$125.00! Now,=20
those125 persons turn around and post the MINIMUM 200 with my name as #3 =
and I=20
only receive 5 replies each,I will make an additional $625.00! OK,now =
here is=20
the fun part,each one of those 625 persons post a MINIMUM of 200 letters =
with my=20
name at #2 and they only receive 5 replies,that just made me =
$3,125.00!!! Those=20
3,125 persons will deliver this message to 200 news groups with my name =
at #1=20
and if still 5 persons per 200 news groups react I will receive =
$15,625.00! With=20
the original investment of only $6.00! AMAZING! When your name is no =
longer on=20
the list, you just take the latest posting in the news groups and send =
out=20
another $6.00 to names on the list, putting your name at number 6 again. =
And=20
start posting again.The thing to remember is, do you realize that =
thousands of=20
people all over the world are joining the internet and reading these =
articles,=20
everday,JUST LIKE YOU ARE NOW!! So can you afford $6.00 and see if it =
really=20
works?? I think so ... People have said,"What if the plan is played out =
and no=20
one sends you the money? So what! What are the chances of that happening =

```
when=20
there are tons of new honest users and new honest users who are joining =
the=20
internet and newsgroups every day and are willing to give it a try? =
Estimates=20
are at 20,000 to 50,000 new users,every day ,with thousands of those =
joining the=20
actual internet. Remember,play FAIRLY and HONESTLY and this will work. =

------=_NextPart_000_0041_01BF8933.E7240C60--
```

1810. (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: jared@cyberport.NET
Message-ID: <005601bf8933$ff666020$a67aa8d0@jared>
Source record: 62710
Body handling: HTML body converted to readable text

```
This is a multi-part message in MIME format.

------=_NextPart_000_0048_01BF8933.E8F87E40

charset="iso-8859-1"

Make Easy Money! Earn Over $10000 in weeks!

Just follow these simple instructions!

LOTS OF CASH, FAST - THIS IS A MAILING LIST PROGRAM -AND COMPLETELY =
LEGAL, THIS REALLY WORKS!! THIS REALLY CAN MAKE YOU EASY MONEY!!IT =
WORKS!!BUT YOU HAVE TO FOLLOW THIS LETTER FOR IT TO WORK!!!! A little =
while back, I was browsing through news groups, just like you are =
now,and came across an article similar to this that said you could make =
thousands of dollars within weeks with only an initial investment of =
6.00!So I thought,"Yeah ,right,this must be a scam", but like most of =
us, I was curious, so I kept reading. Anyway,it said that you send =
$1.00to each of the 6 names and address stated in the article. You then =
place your own name and address in the bottom of the list at #6, and =
post the article in at least 200 news groups.(There are thousands) No =
catch,that was it.So after thinking it over, and talking to a few people =
first,I thought about trying it. I figured what have I got to loose =
except 6 stamps and $6.00, right?Like most of us I was a little =
skeptical and worried about the legal aspects of it all.So I checked it =
out with the U.S. Post Office (1-800-725-2161) and they confirmed it was =
indeed legal! Then I invested the measly $6.00. Well GUESS =
WHAT!!...within 7 days,I started getting money in the mail ! I was =
shocked! I figured it would end soon,but the money just kept coming in. =
In my first, week I made about $25.00. By the end of the second week I =
had made a total of over $1,000.00! In the third week I had over =
$10,000.00 and it's still growing.This is now my fourth week and I have =
made a total of just over $42,000.00 and it is still coming in =
rapidly.It's certainly worth $6.00 and 6 stamps.Let me tell you how this =
works and most importantly, why it works...also make sure you print a =
copy of this article NOW,so you can get information off of it as you =
need it. Believe me, it does work!!
STEP 1:=20
Get 6 separate pieces of paper and write the following on each piece of =
paper"PLEASE PUT ME ON YOUR MAILING LIST".Now get 6 US $1.00 bills and =
place ONE inside each pieces of paper so the bill will not be seen =
through the envelope to prevent thievery. Next, place one paper in each =
of the 6 envelopes and seal them.Now,you should have 6 sealed =
envelopes,each with a piece of paper stating the above phrase,your name =
and address,and a $1.00 bill. What you are doing is creating a service =
```

by this. THIS IS ABSOLUTELY LEGAL! Mail the 6 envelopes to the following =
addresses:=20

#1) S.Bassett RR#1 Cannington,
Ontario,
Canada LOE 1EO=20

#2) Sharon=20
32 Sleepy Hollow LN,
Sicklerville,
NJ 08081=20

#3) Justin=20
3707 Crenna Ave.Concord,
CA 94519=20

#4) Chicollla=20
2 Oxford Mews,=20
Poquoson=20
VA 23662

#5)E. S.K. Law=20
30 Morewood Crescent,=20
Toronto, Ontario,=20
Canada M2K 1L7.

#6) Johny=20

2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of the states)

STEP 2 :=20
Now take the #1 name off the list that you see above, move the other =
names up (6 becomes 5, 5 becomes 4, 4 becomes 3, etc.) add YOUR name as =
number 6 on the list.

STEP 3 :=20
Change anything you need to, but try to keep this article as close to =
original as possible.Now, post your amended article to at least 200 news =
groups. (I think there are close to 24,000 groups.) All you need is 200, =
but remember , the more you post the more money you =
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STEP 2) Open a blank "notepad" file under accessories in windows and =
place your cursor at the top of the blank page.From the 'edit' menu =
select 'paste'.This will paste a copy of the letter into notepad so that =

you can add your name to the list.
STEP 3) Save your new notepad file as a .txt file.If you want to do your =
in different sittings, you will always have this file to go back to.=20
STEP 4)Use Netscape or Internet explorer and try searching for various =
newsgroups (on-line forums, message boards, chat sites, discussions.)
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highlighting the text of this letter and selecting paste from the edit =
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TO POST A MINIMUM OF 200**=20

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postings say I only receive 5 replies (a very low example). So then I =
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$1.00 make the MINIMUM 200 postings,each with my name at #5 and only 5 =
persons to each of the original 5, that is another $25.00 for me,now =
those 25 each make 200 MINIMUM posts with my name at #4 and only 5 =
replies each,I will bring in an additional $125.00! Now, those125 =
persons turn around and post the MINIMUM 200 with my name as #3 and I =
only receive 5 replies each,I will make an additional $625.00! OK,now =
here is the fun part,each one of those 625 persons post a MINIMUM of 200 =
letters with my name at #2 and they only receive 5 replies,that just =
made me $3,125.00!!! Those 3,125 persons will deliver this message to =
200 news groups with my name at #1 and if still 5 persons per 200 news =
groups react I will receive $15,625.00! With the original investment of =
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take the latest posting in the news groups and send out another $6.00 to =
names on the list, putting your name at number 6 again. And start =
posting again.The thing to remember is, do you realize that thousands of =
people all over the world are joining the internet and reading these =
articles, everday,JUST LIKE YOU ARE NOW!! So can you afford $6.00 and =
see if it really works?? I think so ... People have said,"What if the =
plan is played out and no one sends you the money? So what! What are the =
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------=_NextPart_000_0048_01BF8933.E8F87E40

charset="iso-8859-1"

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Get 6 separate pieces of paper and write the=20
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What you are doing is creating a service by this. THIS IS ABSOLUTELY =
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#1) S.Bassett =
RR#1=20
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Ontario,
Canada LOE 1EO

#2) Sharon
32 =
Sleepy=20
Hollow LN,
Sicklerville,
NJ 08081

#3) Justin
3707 =
Crenna=20
Ave.Concord,
CA 94519

#4) Chicollla
2 Oxford Mews, =

Poquoson=20

VA 23662

#5)E. S.K. Law
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Ontario,
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#6) Johny

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Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of=20
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STEP 2 :
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All you need is 200, but remember , the more you post the more money you =

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at #6 Now,each of the 5 persons who just sent me $1.00 make the MINIMUM =
200=20
postings,each with my name at #5 and only 5 persons to each of the =
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------=_NextPart_000_0048_01BF8933.E8F87E40--
```

1811. (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: jared@cyberport.NET
Message-ID: <000b01bf8934$22a051e0$a67aa8d0@jared>
Source record: 62711
Body handling: HTML body converted to readable text

```
This is a multi-part message in MIME format.

------=_NextPart_000_0041_01BF8933.E7240C60

charset="iso-8859-1"

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Toronto,=20
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Canada M2K 1L7.

#6) Johny

2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of=20
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that is another $25.00 for me,now those 25 each make 200 MINIMUM posts =
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name at #4 and only 5 replies each,I will bring in an additional =
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------=_NextPart_000_0041_01BF8933.E7240C60--
```

1812. (none)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: jared@cyberport.NET
Message-ID: <000c01bf8934$5aef4c40$a67aa8d0@jared>
Source record: 62712
Body handling: HTML body converted to readable text

```
This is a multi-part message in MIME format.

------=_NextPart_000_004E_01BF8933.EB43F4E0

charset="iso-8859-1"

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$1.00to each of the 6 names and address stated in the article. You then =
place your own name and address in the bottom of the list at #6, and =
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catch,that was it.So after thinking it over, and talking to a few people =
first,I thought about trying it. I figured what have I got to loose =
except 6 stamps and $6.00, right?Like most of us I was a little =
skeptical and worried about the legal aspects of it all.So I checked it =
out with the U.S. Post Office (1-800-725-2161) and they confirmed it was =
indeed legal! Then I invested the measly $6.00. Well GUESS =
WHAT!!...within 7 days,I started getting money in the mail ! I was =
shocked! I figured it would end soon,but the money just kept coming in. =
In my first, week I made about $25.00. By the end of the second week I =
had made a total of over $1,000.00! In the third week I had over =
$10,000.00 and it's still growing.This is now my fourth week and I have =
made a total of just over $42,000.00 and it is still coming in =
rapidly.It's certainly worth $6.00 and 6 stamps.Let me tell you how this =
works and most importantly, why it works...also make sure you print a =
copy of this article NOW,so you can get information off of it as you =
need it. Believe me, it does work!!
STEP 1:=20
Get 6 separate pieces of paper and write the following on each piece of =
paper"PLEASE PUT ME ON YOUR MAILING LIST".Now get 6 US $1.00 bills and =
place ONE inside each pieces of paper so the bill will not be seen =
through the envelope to prevent thievery. Next, place one paper in each =
of the 6 envelopes and seal them.Now,you should have 6 sealed =
envelopes,each with a piece of paper stating the above phrase,your name =
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by this. THIS IS ABSOLUTELY LEGAL! Mail the 6 envelopes to the following =
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#1) S.Bassett RR#1 Cannington,
Ontario,
Canada LOE 1EO=20

#2) Sharon=20
32 Sleepy Hollow LN,
Sicklerville,
NJ 08081=20

#3) Justin=20
3707 Crenna Ave.Concord,
CA 94519=20

#4) Chicollla=20
2 Oxford Mews,=20
Poquoson=20
VA 23662

#5)E. S.K. Law=20
30 Morewood Crescent,=20
Toronto, Ontario,=20
Canada M2K 1L7.

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2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
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1813. (none)

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Date: 2000-03-09 00:00:00 UTC
From: jared@cyberport.NET
Message-ID: <004601bf8934$5a690540$a67aa8d0@jared>
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letters with my name at #2 and they only receive 5 replies,that just =
made me $3,125.00!!! Those 3,125 persons will deliver this message to =
200 news groups with my name at #1 and if still 5 persons per 200 news =
groups react I will receive $15,625.00! With the original investment of =
only $6.00! AMAZING! When your name is no longer on the list, you just =
take the latest posting in the news groups and send out another $6.00 to =
names on the list, putting your name at number 6 again. And start =
posting again.The thing to remember is, do you realize that thousands of =
people all over the world are joining the internet and reading these =
articles, everday,JUST LIKE YOU ARE NOW!! So can you afford $6.00 and =
see if it really works?? I think so ... People have said,"What if the =
plan is played out and no one sends you the money? So what! What are the =
chances of that happening when there are tons of new honest users and =
new honest users who are joining the internet and newsgroups every day =
and are willing to give it a try? Estimates are at 20,000 to 50,000 new =
users,every day ,with thousands of those joining the actual internet. =
Remember,play FAIRLY and HONESTLY and this will work.=20

------=_NextPart_000_004E_01BF8933.EB43F4E0

charset="iso-8859-1"

Make Easy Money! Earn Over $10000 in weeks!

Just follow these simple instructions!

LOTS OF CASH, FAST - THIS IS A MAILING LIST PROGRAM -AND COMPLETELY =
LEGAL,=20
THIS REALLY WORKS!! THIS REALLY CAN MAKE YOU EASY MONEY!!IT WORKS!!BUT =
YOU HAVE=20
TO FOLLOW THIS LETTER FOR IT TO WORK!!!! A little while back, I was =
browsing=20
through news groups, just like you are now,and came across an article =
similar to=20
this that said you could make thousands of dollars within weeks with =
only an=20
initial investment of 6.00!So I thought,"Yeah ,right,this must be a =
scam", but=20
like most of us, I was curious, so I kept reading. Anyway,it said that =
you send=20
$1.00to each of the 6 names and address stated in the article. You then =
place=20
your own name and address in the bottom of the list at #6, and post the =
article=20
in at least 200 news groups.(There are thousands) No catch,that was =
it.So after=20
thinking it over, and talking to a few people first,I thought about =
trying it. I=20
figured what have I got to loose except 6 stamps and $6.00, right?Like =
most of=20
us I was a little skeptical and worried about the legal aspects of it =
all.So I=20
checked it out with the U.S. Post Office (1-800-725-2161) and they =
confirmed it=20
was indeed legal! Then I invested the measly $6.00. Well GUESS =
WHAT!!...within 7=20
days,I started getting money in the mail ! I was shocked! I figured it =
would end=20
soon,but the money just kept coming in. In my first, week I made about =
$25.00.=20
By the end of the second week I had made a total of over $1,000.00! In =
the third=20
week I had over $10,000.00 and it's still growing.This is now my fourth =
week and=20
I have made a total of just over $42,000.00 and it is still coming in=20
rapidly.It's certainly worth $6.00 and 6 stamps.Let me tell you how this =
works=20
and most importantly, why it works...also make sure you print a copy of =
this=20
article NOW,so you can get information off of it as you need it. Believe =
me, it=20
does work!!
STEP 1:
Get 6 separate pieces of paper and write the=20
following on each piece of paper"PLEASE PUT ME ON YOUR MAILING LIST".Now =
get 6=20
US $1.00 bills and place ONE inside each pieces of paper so the bill =

will not be=20
seen through the envelope to prevent thievery. Next, place one paper in =
each of=20
the 6 envelopes and seal them.Now,you should have 6 sealed =
envelopes,each with a=20
piece of paper stating the above phrase,your name and address,and a =
$1.00 bill.=20
What you are doing is creating a service by this. THIS IS ABSOLUTELY =
LEGAL! Mail=20
the 6 envelopes to the following addresses:

#1) S.Bassett =
RR#1=20
Cannington,
Ontario,
Canada LOE 1EO

#2) Sharon
32 =
Sleepy=20
Hollow LN,
Sicklerville,
NJ 08081

#3) Justin
3707 =
Crenna=20
Ave.Concord,
CA 94519

#4) Chicollla
2 Oxford Mews, =

Poquoson=20

VA 23662

#5)E. S.K. Law
30 Morewood Crescent, =

Toronto,=20
Ontario,
Canada M2K 1L7.

#6) Johny

2465 Middle RD

Columbia Falls MT, 59912

(Be sure to use the correct postage when mailing to the the states or =
out of=20
the states)

STEP 2 :
Now take the #1 name off the list that you see above, =
move the=20
other names up (6 becomes 5, 5 becomes 4, 4 becomes 3, etc.) add YOUR =
name as=20
number 6 on the list.

STEP 3 :
Change anything you need to, =
but try=20
to keep this article as close to original as possible.Now, post your =
amended=20
article to at least 200 news groups. (I think there are close to 24,000 =
groups.)=20
All you need is 200, but remember , the more you post the more money you =

make!---DIRECTIONS---HOW TO POST TO NEWS
GROUPS---
STEP 1) You =
don't need=20
to re-type this entire letter to do your own posting. Simply put your =
cursor at=20
the beginning of this letter and drag your cursor to the bottom of this=20
document,and select 'copy' from the edit menu. This will copy the entire =
letter=20
into the computers memory.
STEP 2) Open a blank "notepad" file under =

accessories in windows and place your cursor at the top of the blank =
page.From=20
the 'edit' menu select 'paste'.This will paste a copy of the letter into =
notepad=20
so that you can add your name to the list.
STEP 3) Save your new =
notepad file=20
as a .txt file.If you want to do your in different sittings, you will =
always=20
have this file to go back to.
STEP 4)Use Netscape or Internet =
explorer and=20
try searching for various newsgroups (on-line forums, message boards, =
chat=20
sites, discussions.)
STEP 5) Visit message boards and post this =
article as a=20
new message by highlighting the text of this letter and selecting paste =
from the=20
edit menu. Fill in the Subject,this will be the header everyone sees as =
then=20
scroll through the list of postings in a particular group!**REMEMBER,THE =
MORE=20
NEWSGROUPS YOU POST IN,THE MORE MONEY YOU WILL MAKE!! BUT YOU HAVE TO =

POST A=20
MINIMUM OF 200**

That's it ! You will begin receiving money from =
around=20
the world within days. You may eventually want to rent a P.O. Box due to =
the=20
large amount of mail you will receive.If you wish to stay anonymous,you =
can=20
invent a name to use, as long as the postman will deliver it. **JUST =
MAKE SURE=20
ALL THE ADDRESSES ARE CORRECT.** Now the WHY part: Out of the 200 =
postings say I=20
only receive 5 replies (a very low example). So then I made $5.00 with =
my name=20
at #6 Now,each of the 5 persons who just sent me $1.00 make the MINIMUM =
200=20
postings,each with my name at #5 and only 5 persons to each of the =
original 5,=20
that is another $25.00 for me,now those 25 each make 200 MINIMUM posts =
with my=20
name at #4 and only 5 replies each,I will bring in an additional =
$125.00! Now,=20
those125 persons turn around and post the MINIMUM 200 with my name as #3 =
and I=20
only receive 5 replies each,I will make an additional $625.00! OK,now =
here is=20
the fun part,each one of those 625 persons post a MINIMUM of 200 letters =
with my=20
name at #2 and they only receive 5 replies,that just made me =
$3,125.00!!! Those=20
3,125 persons will deliver this message to 200 news groups with my name =
at #1=20
and if still 5 persons per 200 news groups react I will receive =
$15,625.00! With=20
the original investment of only $6.00! AMAZING! When your name is no =
longer on=20
the list, you just take the latest posting in the news groups and send =
out=20
another $6.00 to names on the list, putting your name at number 6 again. =
And=20
start posting again.The thing to remember is, do you realize that =
thousands of=20
people all over the world are joining the internet and reading these =
articles,=20
everday,JUST LIKE YOU ARE NOW!! So can you afford $6.00 and see if it =
really=20
works?? I think so ... People have said,"What if the plan is played out =
and no=20
one sends you the money? So what! What are the chances of that happening =

```
when=20
there are tons of new honest users and new honest users who are joining =
the=20
internet and newsgroups every day and are willing to give it a try? =
Estimates=20
are at 20,000 to 50,000 new users,every day ,with thousands of those =
joining the=20
actual internet. Remember,play FAIRLY and HONESTLY and this will work. =

------=_NextPart_000_004E_01BF8933.EB43F4E0--
```

1814. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a7565$m44$1@nnrp1.deja.com>
Source record: 62714
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <eAnx4.16604$84.505168@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:

> electricaly short dipole is capacitively reactive at the receiving
frequency
> and bends radio waves into the receiving dipole. Behind the long
reflector
> dipole acts inductive, and reflects energy back into the receiving
dipole,
> which is purely resistive at the receiving frequency.
>
> Nothing weird here.

If that's not weird, then "energy sucking" isn't so weird
either, in my opinion. If the induced V and I on the
director element causes energy to be "lensed" towards
the active element, and if the fields generated by the
director are the cause... then if this whole process
could be performed by a single object (being director
and receiver simultaneously), then we'd have an
"energy sucking" device.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1815. Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8a75in$mg6$1@nnrp1.deja.com>
Source record: 62715

I'm home brewing a 50-900 Mhz reciever similar to the one in the current issue of 73 magizene. I have a nice Sony digital tuning varactor tuner, in which I have disabled the control/synth chip and will control tuning with a pot to the varactor ckt. The original IF is a second modual with a 1 chip combined video/IF and Sound/IF with a 4.5 Mhz filter between the two sections of the chip. The 41 Mhz video carrer normaly acts as a mixer oscilator input for the sound IF. There is also a 45 Mhz SAW filter (wide band) between the tuner and the IF chip. I would replace the SAW filter with a nerrow band 45 Mhz filter (15 K), and install a FET buffer between the filter and the IF amp input.
Next I would replace the 4.5 Mhz Ceramic filter between the Video/IF and Sound/IF with a SA 612 Mixer IC and use a mixer oscilator frequency of about +/- 44 Mhz.
All this (I think) should render a combination of an AM output from the video output and an FM output from the sound output.

Now, can any one find a hole in my plan and if so what is it and can it be easly fixed?

My other option is to use the 45 Mhz nerrow band filter, a buffer fet, a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector chip and add a second 612 to convert the 10.7 to 455 Khz for AM, with a third 612 as a 445 Khz mixer for SSB.

All constructive input appricated.

dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1816. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a77qd$o3p$1@nnrp1.deja.com>
Source record: 62716
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8cbkvp.lmo.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> > Right. If the energy is stored over many cycles, then fast
> > modulations will be washed out. That's what I'd expect.
> > The time constant for flourescent materials is long compared
> > to period of the waves involved. A resonant antenna would
> > act as if the incoming waves "pump it up" over time.
>
> Why? Flourescence occurs because the transitions from the
> state emitting the light are inhibited from decaying but
> are not the states excited by the incident radiation. If they
> were the same state, from considerations of time-reversal, you
> coupldn't populate the state faster than it decays. It occurs
> from transitions like:

I was under the impression that some fluorescence didn't
involve metastable states. I was thinking in terms of
an atom with a narrow absorbtion band having a small
probability of absorbing a photon (which would lead to
a long "pumping up" time) and a small probability of
emitting one (which would give a long decay time once
the incoming radiation ceased.) This would be analogous
to a resonator which takes many cycles to aquire energy
from a wavetrain, and many cycles to decay again.

> Because the tank has a large Q, it's losses through the internal
> resistances of its elements is small. That doesn't allow it to
> accumulate energy, since you have to connect to it to (1) attach
> the antenna, (2) arrange for charge to go in and out if you want
> to do anything. With nothing but the antenna attached, guess
what
> happens with the energy stored in the tank each cycle? Remember,
> it's a reversible process.

I understand what you're thinking (I think). If you're right,
then the short antenna would radiate energy as fast as it
absorbed it, and the presence of the resonant circuit would
not change this.

> I think you might be getting the idea except that instead of
thinking
> Q think "energy sucking idea". The process has to be totally
> reversible.

THERE'S a key point. If my understanding of the "energy sucking" mechanism is correct, then because the process involves interaction between the incoming EM waves and the fields generated by the resonator, it is NOT reversible, and the time constant for intercepting energy is shorter than the time constant for losses by radiation from the antenna. There would be an analog for Stimulated Emission: if the phase of the incoming waves were to shift 180deg, then any stored energy in the resonator would be "anti-sucked" and would dump out faster than it would ordinarily radiate.

> > Raising the Q to enhance the "energy sucking" effect
> > might be good for S/N ratio, but bad for bandwidth and
> > audio fidelity of an AM signal.
>
> That's another reason the "energy sucking" cant be right.

Slightly separate topic: does a resonant antenna receive more energy than a non-resonant antenna of similar geometery? Does the presence of a tank circuit actually change the effective area of a loop antenna, yes or no? In other words, is there evidence that SOMETHING occurs, even if it might not be exactly what I am discussing?

If you insist that "energy sucking" cannot exist on theoretical grounds, but if an ACTUAL ANTENNA does receive significantly more energy when it's part of a resonant circuit, then experiment beats theory.

I don't have reference books which discuss this, but earlier messages have mentioned that the presence of a tuned circuit DOES increase the effective area significantly. If they had not, and if those two physicist groups had not published papers about the topic, then I would be far less confident about the existence of the phenomenon.

Speaking of experiment. If I have time in the future, I'll try measuring the attack time of a resonant loop antenna receiving a carrier from a distant transmitter. If an AM signal can create a couple of volts on it, then a fast switch and a scope should let me watch as stored energy ramps up. (Short the capacitor, then suddenly remove the short and see if it ramps up over many cycles.) Hey, I can even throw a capacitance across it afterwards, to detune it so it ramps back down again.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1817. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ce9n1.u75.root@radioactivex.lebesque-al.net>
Source record: 62717
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>>>In article <eAnx4.16603$84.505168@elnws01>, Scott Stephens
>Richard Herring wrote in message <8a5do9$g5d$2@miranda.gmrc.gecm.com>...
>>In article <eAnx4.16603$84.505168@elnws01>, Scott Stephens

>>
>>> Did you know photons have a magnetic moment?
>>
>>Really? What's its value? How did you measure it?
>
>
>I'm sorry, I looked for the article but can't find it. I don't expect you to
>take my word for it. Maybe a post to some physics newsgroup would get an
>answer?
>

Good. I dont expect you to find it and this is as good a group as any
to post to for an answer, which is - photons do not have a maagnetic
moment. Mainly, because they aren't charged. They aren't charged, because
that would really screw up qed. If photons had magnetic moments, one could
observe effects of the usual m\cdot B, variety. They do have a spin
angular momentum, though and it happens to be 1. However, spin alone doth
not a magnetic moment generate. The true skeptic may wish perform an
experiment though. Take the plane polarized light from a laser and shine
it down a solenoid. Several days of sleep deprivation might convince one
that the plane of polarization rotated about the axis of the solenoid.
Another day or so awake, and a dubious non-zero result for the amount
of bend one gets from a magnet held next to a flashlight might emerge.
Finally, one may deduce a limit on the magnetic moment and the charge
(B\rho = p/q ; \rho = radius of curvature) and consider investing in a
Berlitz book of swedish phrases for the black-tie weekend ahead.

1818. trade kenwood

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Edwardc@thezone.net
Message-ID: <38c72739.33533903@news.thezone.net>
Source record: 62718

i wanna trade a tm kenwood 261 a two meter mobile
new only 2 months old still have bill and in miint condition reason
for selling i want a digital camera i wanna trade for a digital
camera. any one interested. in trading. i have pictures of the radio
if your interested it got 5 25 50 watts both newmeric and alpha
newmeric readout dial pad mike. and many features auto dial
stores up to sixty channels stores up to 20 phone numbers i thinks.
has many options i can list them all. but realy nice radio. i use it
as a base so never bounced around in car. never hooked up in car.
if interested eamil me i need a digital camera for my comepuer. please
respond with offers.

1819. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cej5g.u75.root@radioactivex.lebesque-al.net>
Source record: 62719
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8cbkvp.lmo.root@radioactivex.lebesque-al.net>,

> I was under the impression that some fluorescence didn't
> involve metastable states. I was thinking in terms of

The process must be time reversal invariant. Excitation
directly to a state which may decay by the same process
must BE the same process. The only way to achieve a long lived
state is to poplulate a state in such a way that the decay
process is inhibited by selection rules. If you

> an atom with a narrow absorbtion band having a small
> probability of absorbing a photon (which would lead to

If you want to think of it in terms of a resonance widths,
you can do that. In fact, it's quite common to do so.
In terms of the reaction cross section, you get the
general Breut-Wigner form,
\sigma \propto [(E - Er) + {\Gamma^{2}\over 4}]^{-1}
for a lot of seemingly unrelated phenomena where E is the
Energy you have to use, Er is the energy required for the
reaction and \Gamma is 1/t, with t = lifetime of the state.
Notice at the energy where E = Er, the probability is a
maximum AND that it says nothing about whether that is
the probability of forming the state or decaying through the
same channel.

This should look uncannily like the impedance of an antenna
which will produce a current for any given potential difference
with some sort of dependence that goes as:
1/[(wL - 1/wc)^2 + R^{2})]

With the exact form being dependent upon all of the relevant
R,L,Cs, but the point being, at resonance, by definition,
the wL cancel the 1/wC. The basic differences between two
antennas that present comparable cross-sections is in the
exact form of the impedance. For comparable wavelengths, your
"energy sucking" is just the antenna presenting the best
current flow due to the impedance and potentials created by
the incoming photons. It's obviously highly frequency dependent.

> a long "pumping up" time) and a small probability of
> emitting one (which would give a long decay time once
> the incoming radiation ceased.)

This violates time reversal invariance.

> THERE'S a key point. If my understanding of the "energy
> sucking" mechanism is correct, then because the process
> involves interaction between the incoming EM waves and the
> fields generated by the resonator, it is NOT reversible, and
> the time constant for intercepting energy is shorter than

That involves two violations that no one plans on giving up
without quite a lot of wailing and gnashing of teeth.
QED and time reversal. If one E&M field can affect another
E&M directly, AT ALL, you have to ditch all of modern
physics. The only self-interacting field for which a theory
exists is QCD, and gluons have a range of quite a bit less
than infinity due to this. In fact, the range cant be greater
than a proton radius and it certainly is not going to have
a 1/r^2 dependence by any stretch of the imagination. As for
time reversal, since it is believed that EVERY physical
law is cpt-invariant, your antenna needs to violate cp
to violate t. Given that E&M is a vector interaction and
charge is a good symmetry, it'll be a hard sell. The weak
interaction can get away with this sort of thing since it's
vector - axial vector. E&M cant.

> Slightly separate topic: does a resonant antenna
> receive more energy than a non-resonant antenna of
> similar geometery?

No. It just doesn't lose energy due to the reactance.

> Does the presence of a tank circuit
> actually change the effective area of a loop antenna,

Only in the sense that from a calculational point of view
you may be able to find a particularly simple way to express
the losses that way, but not as the underlying fundamental
process. Recall that reaction cross sections are done analogously
and are expressed in termas of an area (barns, being the usual
units du jour) Certainly a target nucleus doesn't size from it's
point of view or the point of view of the labratory when the incident
beam enery changes.

> yes or no? In other words, is there evidence that SOMETHING
> occurs, even if it might not be exactly what I am discussing?
>
Take the "energy suck" factor, subtract it from the world
and call the result "power loss due to impedance". Mumble
something about gauge freedom and if it's useful to calculate
an answer, make the connection rigorous, but don't mistake
it for the underlyung physics.

> If you insist that "energy sucking" cannot exist on
> theoretical grounds, but if an ACTUAL ANTENNA does receive
> significantly more energy when it's part of a resonant
> circuit, then experiment beats theory.

>
Experimeents beat theory when they disagree on what the theory
claims the measurements should be and what the experiments say
they are. Your suggested experiment doesn't prove anything other
than the antenna receives more energy connected to a resonant
circuit. It's purely a phenomenological model that may be useful,
like the liquid drop model in nuclear physics, but it doesn't
address "why" at all. For that, you need to be able to predict
a result you can measure that cannot be compatible with any other
model. I don't see any incompatibility with your antenna and
classical E&M and right off hand, I have a hard time imagining
how you could find something that would provide an opportunity
to show a discrepancy.

> topic, then I would be far less confident about the
> existence of the phenomenon.
>
Look, it's possible to take anything and fit it to a particularly
convenient choice of parameters, especially if you have a lot of
parameters (I suggest a brief perusal of the nuclear optical
model which allows the fitting of scattering data to 11 parameters
- which are even physically reasonable after a looking closely).
Given a theory with enough parameters, I can explain the universe.
The hard part is reducing the set to the minimum, not conjuring up
new ones to replace looking deeper into the problem. Anyone
can do that.

> remove the short and see if it ramps up over many cycles.)
> Hey, I can even throw a capacitance across it afterwards,
> to detune it so it ramps back down again.
>

You realize that your Q is defined by the energy stored in a cycle
right? As the impedance has a direct bearing on this, you are
shooting yourself in the foot.

1820. information

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: aguessy fidegnon <aguessyf@rc.bel.alcatel.be>
Message-ID: <38C76C2F.F9E76F38@rc.bel.alcatel.be>
Source record: 62720

i'm looking for something or someone who can explain to me how amateur radio work , how the signal is sent in a scientific way i.e. with formulas

thanks

1821. Re: information

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8a7vq9$90b$1@uranium.btinternet.com>
Source record: 62721

You will not do any better than beg, borrow or buy the

"THE ARRL HANDBOOK FOR RADIO AMATEURS"

Published by -

The American Radio Relay League
225 Main Street
Newington
CT 06111-1494

and I'm an Englishman.
==========
Regards from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========
aguessy fidegnon <aguessyf@rc.bel.alcatel.be> wrote in message
news:38C76C2F.F9E76F38@rc.bel.alcatel.be...
> i'm looking for something or someone who can explain to me how
amateur
> radio work , how the signal is sent in a scientific way i.e. with
> formulas
>
> thanks
>
>
>

1822. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38C7C7E5.C22662C0@home.com>
Source record: 62722

Just for fun, you might want to take a look at Analog Devices "Othello" - it
was featured in this month's edition of Analog Dialogue.

dr.dongle@juno.com wrote:

> I'm home brewing a 50-900 Mhz reciever similar to the one in the
> current issue of 73 magizene. I have a nice Sony digital tuning
> varactor tuner, in which I have disabled the control/synth chip and
> will control tuning with a pot to the varactor ckt. The original IF is
> a second modual with a 1 chip combined video/IF and Sound/IF with a 4.5
> Mhz filter between the two sections of the chip. The 41 Mhz video carrer
> normaly acts as a mixer oscilator input for the sound IF. There is also
> a 45 Mhz SAW filter (wide band) between the tuner and the IF chip.
> I would replace the SAW filter with a nerrow band 45 Mhz filter (15
> K), and install a FET buffer between the filter and the IF amp
> input.
> Next I would replace the 4.5 Mhz Ceramic filter between the Video/IF
> and Sound/IF with a SA 612 Mixer IC and use a mixer oscilator frequency
> of about +/- 44 Mhz.
> All this (I think) should render a combination of an AM output from
> the video output and an FM output from the sound output.
>
> Now, can any one find a hole in my plan and if so what is it and can
> it be easly fixed?
>
> My other option is to use the 45 Mhz nerrow band filter, a buffer fet,
> a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector
> chip and add a second 612 to convert the 10.7 to 455 Khz for AM, with a
> third 612 as a 445 Khz mixer for SSB.
>
> All constructive input appricated.
>
> dr.d
> --
> Stop the madness vote Libertarian!
> All it takes for EVIl to triumph is for good people to do nothing!
> -Edmond Burke-
> Chris Snyder, Cosby, Tn. KD4 OGD
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

1823. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <8a87peboe1@uranium.btinternet.com>
Source record: 62723
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hi It CAN be doen but it is a lot easier with a SA . Try a RX and a siggen
and tune for max rejection. If you must use a power meter tune for a sharp
null not a peak.
Cheers de Alan G3NYK
ke2ls@attglobal.net wrote in message <38C71A9C.FAEBB83@attglobal.net>...
>Don't even waste your time trying to tune duplexers with a dummy load
>and watt meter...Never tune a duplexer with RF power applied !!
>
>KE2LS
>145.27, 224.78, 442.70, 53.13
>Repeaters Powered by GE/Ericsson

1824. 2SC1945 - equivalent please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Robin Birch <robin.birch@postoffice.co.uk>
Message-ID: <952608491.328429@igateway.postoffice.co.uk>
Source record: 62724
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Dear All,
Can someone give me an equivalent - 2N or BC for this?

Regards

Robin

1825. 73 Magazine

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Finlay MacLeod Fraser <ceefmf@cee.hw.ac.uk>
Message-ID: <38C7B624.11D13371@cee.hw.ac.uk>
Source record: 62725

Is there a web site for 73 magazine. I have been lookig but unable to find it?

Thanks

1826. Re: 73 Magazine

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Jim Buttitta <Jbuttitta@netzeroNS.net>
Message-ID: <a8DHOP9Z5F0SWLvwk3byH3xpqkOd@4ax.com>
Source record: 62726

On Thu, 09 Mar 2000 14:33:08 +0000, Finlay MacLeod Fraser
<ceefmf@cee.hw.ac.uk> wrote:

>Is there a web site for 73 magazine. I have been lookig but unable to
>find it?
>
>Thanks

The nearest thing is Wayne Green's site:
http://www.waynegreen.com/wayne/

Jim

1827. Re: Need UTC CG-301 transformer info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: dunnt@its.caltech.edu
Message-ID: <dunnt-0903000759190001@dhcp-40-204.caltech.edu>
Source record: 62727

In article <38C6B0A0.85289D9E@ncdc.noaa.gov>, Doug Snowden
<dsnowden@ncdc.noaa.gov> wrote:

>Can someone find an old catalog and tell me
>what the pinout (voltages) are there for an
>old UTC CG-301 transformer?
>
>Doug,
>dsnowden@ncdc.noaa.gov

Catalog does not have pin out info, but voltages are as follows

input 105,115,210,220,230 volts 50/60Hz

output 580-530-300-0-300-530-580 volts

current 420ma with fullwave rectified and center tap common
290ma with fullwave rectified

INFO from 1970 UTC transformer catalog. 73 Tom WB6IQD

1828. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <38C7CF9A.580@mad.scientist.com>
Source record: 62728
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

ke2ls@attglobal.net wrote:
>
> Don't even waste your time trying to tune duplexers with a dummy load
> and watt meter...Never tune a duplexer with RF power applied !!
>
> KE2LS
> 145.27, 224.78, 442.70, 53.13
> Repeaters Powered by GE/Ericsson

thanks for the replies, guess it'll have to wait.
desense bites.

low cost recommendations for 6m duplexer, anyone, anyone ??

thanks for your time, the groups rule
--
A.C. Curtis
KBï¿½WLF
53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

1829. Re: Need UTC CG-301 transformer info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38c7d6a9.163782778@news.azstarnet.com>
Source record: 62729

On Thu, 09 Mar 2000 07:59:19 -0800, dunnt@its.caltech.edu (Tom Dunn) wrote:

>In article <38C6B0A0.85289D9E@ncdc.noaa.gov>, Doug Snowden
><dsnowden@ncdc.noaa.gov> wrote:
>
>>Can someone find an old catalog and tell me
>>what the pinout (voltages) are there for an
>>old UTC CG-301 transformer?
>>
>>Doug,
>>dsnowden@ncdc.noaa.gov
>
>Catalog does not have pin out info, but voltages are as follows
>
>input 105,115,210,220,230 volts 50/60Hz
>
>output 580-530-300-0-300-530-580 volts
>
>current 420ma with fullwave rectified and center tap common
> 290ma with fullwave rectified
>
>INFO from 1970 UTC transformer catalog. 73 Tom WB6IQD

Hey, another guy that doesn't throw anything away. My UTC catalog is a 1966
though...

BTW, the price of the transformer was $33.00. Big $$ in '66.

73, Wes N7WS

1830. Re: 6m "duplexer" options...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: pete0@ibmserv.com
Message-ID: <38C7DCDA.77FE@ibmserv.com>
Source record: 62730
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

> low cost recommendations for 6m duplexer, anyone, anyone ??

You have 3 options:

1) find used duplexers (big!) they are around from PD's & FD's
moving from low band to high/trunked. They range from free,
to expensive, and might be hard to find.

2) Use split site, and send traffic via linked radios (UHF).
This is very practical & works well, if you have 2 sites.

3) Use large size (1-1/2 to 2") heliax, and make notch stubs
for each line and notch out the other freq. This does work,
a bit less efficient than #2 above, but can be made to work.
You'll need to make about 3 to 4 to make it work right.

Good luck.

1831. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: bergervo@natlab.research.philips.com
Message-ID: <bergervo.952619883@rook>
Source record: 62731
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag, Richard Herring writes:
>
>Photon-photon interactions are a second-order effect in QED.
>
In QED this is called a 4th order effect. Photon-photon
interaction requires a fermion loop with 4 photons attached,
hence 4 vertices and the 4th power of the coupling constant, e.

>not any innate property of photons. In free space, superposition
>still holds (apart from that 2nd-order QED caveat.)

Breaking of superposition in free space not only comes from
photon-photon interaction, but also the vacuum polarization
(a kind of photon-vacuum interaction). It is important for
the hyperfine structure in every atom. It occurs at high
fieldstrengths (e.g. 10^21 V/m, or 10^12 Tesla).

And if you compute the fieldstrength at the outside of one
single proton (radius about 10^(-15) meter) you find ... !

-- Jos

1832. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Jos R Bergervoet <Jos.Bergervoet@philips.com>
Message-ID: <38C7D950.620B@philips.com>
Source record: 62732
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Scott Stephens wrote:
>
> Look at the ubiquitous roof-top log-periodic TV antenna, you notice
> (for a 3 element anyways) a short dipole called a director, the
> receiving dipole that's 1/2 wave, and behind a long dipole called a
> reflector. The ...

That's not called a log-periodic antenna, but a Yagi-Uda antenna
because it was invented by Mr. Uda.

(Mr. Yagi presented it outside Japan and explicitely attributed it
to his colleague, but probably the attendants did not listen, or
could not understand his English).

-- Jos

1833. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c7e64e.87323502@news.online.no>
Source record: 62733

On Thu, 09 Mar 2000 03:25:13 GMT, dr.dongle@juno.com wrote:

>
> My other option is to use the 45 Mhz nerrow band filter, a buffer fet,
>a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector
>chip and add a second 612 to convert the 10.7 to 455 Khz for AM, with a
>third 612 as a 445 Khz mixer for SSB.
>
Hi
I really don't see the point in convertion to 455kHz for AM and SSB,
it might be a point 40 years ago, as would it be to go further to
50kHz, but the only argument to use 455kHz is to demodulate NBFM

on the other hand you could go from 10.7 to 50kHz for DSP, but if it
is just conventional arrangement you wish to have it is easy to find
suitable AM and SSB filters on 10.7MHz

One suggestion is to use NE614 as a multimode detector for AM SSB FM

73
jan-martin
LA8AK

1834. Re: Plotting directly onto PCB laminate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <952596229.572300251@news.indigo.ie>
Source record: 62734

"Robin G3LBA" <robin@g3lba.freeserve.co.uk> wrote:
>How good is the linearity of the laser printer? I have a IIID and I find it
>pretty good but nowhere near a plotter for accuracy..

Good enough for 40 pin chips with tracks between the pins.
I use an old 300dpi Apple LaserWriter. Have a look at:

http://www.qsl.net/ei9gq/pcb.html

73, Ed. EI9GQ

--

Remove 'X' to reply.

1835. Re: Newbie needs help!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Mike Tatum <miket@cybatek.fsnet.co.uk>
Message-ID: <8a8r5u$e26$1@newsg2.svr.pol.co.uk>
Source record: 62735

Hi Doug,

Thanks for the info, do you know where I can find some circuit diags for
such a beast ?

Cheers!

MikeT ...

Troglodite <troglodite@aol.com> wrote in message
news:20000308151934.17322.00001631@ng-xe1.aol.com...
> >
> >I've now reached the point where I want to have a go at build a valve
> >transmitter, either CW or SSB.
> >Ideally I'd like it to be SSB on 160m as this is a great band for local
> >nets.
> >
> >Can anyone give me any clues as to where to start ?
> >Does anyone have any URL's with circuit diags on that I could use to
build
> >my first valve TX ?
> >
> >Please reply to the group but also reply to me directly on the CC as my
> >provider is a tad laxing
> >when it comes to news groups :)
>
> Mike,
>
> My advice, if you have never built anything from scratch before, would be
to
> start simple. One of the classic one-tube CW transmitters using a crystal
and a
> 6V6 or something along those lines. There's a lot of satisfaction in
seeing it
> work, and using it on the air. Failing at a project too complex for a
first try
> will tend to discourage you. The best matadors start with the small bulls
and
> work their way up.
>
> Doug Moore KB9TMY (Formerly K6HWY)
>
>

1836. Re: UV Light Boxes for PCB's ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Clifford Buttschardt <cbuttsch@slonet.org>
Message-ID: <Pine.GSO.3.95.1000309105545.22276D-100000@oso.slonet.org>
Source record: 62736

Yuko. Can you tell me if the intensity of the germicidal lamps is any where close to the intensity found in outer space? I am looking for a source on earth to simulate UV radiation found on spacecraft. Cliff K7RR

1837. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a8tol$va2$1@nnrp1.deja.com>
Source record: 62737
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8cej5g.u75.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

<massive snips>
> With the exact form being dependent upon all of the relevant
> R,L,Cs, but the point being, at resonance, by definition,
> the wL cancel the 1/wC. The basic differences between two
> antennas that present comparable cross-sections is in the
> exact form of the impedance. For comparable wavelengths, your
> "energy sucking" is just the antenna presenting the best
> current flow due to the impedance and potentials created by
> the incoming photons.

This argument is spreading all over the place. I want to
focus on one little part before going any further.

Please help me understand your position: are you saying
that, at resonance, if the short antenna's (real, lossy)
tank circuit appears as a nonreactive resistance, and
then if I replace the whole tank circuit with a carbon
resistor of the same value, the SAME energy will be received?

Just so there's no misunderstanding: place a load resistor
across a very short receiver-dipole and ADJUST THE
RESISTANCE for maximum received power. Measure the power
in the resistor somehow. No tank circuit. (Assume it
is receiving a CW radio signal.)

OK, now place a lossless LC circuit across the resistor on
the above dipole antenna, tune it to resonance, and
re-adjust the load resistor for maximum received power
(is this even necessary?) In both cases the short dipole
sees only a resistive load attached to it. In both cases
that load has been adjusted for maximum received power.

Will the received power being dissipated by the load
resistor be the same in both cases?

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1838. FS: IF-amp AM-427 A/U

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: arnoldg@sf.telia.no
Message-ID: <38c80370.43349601@news.telia.no>
Source record: 62738
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I got a lot of these - about 75 - 80 I think. They have a B7G socket
and is about the same size as a 6AQ5 valve. All metal. Yellow colour.
The label says:
IF AMPLIFIER AM-427 A/U
FISHER RADIO CORPORATION
U.S.

Inside this hermetically sealed box there is a complete IF-amp. One
5678 subminiature valve, two inductors a few capacitors and resistors.

They are all new and in original boxes. I really don't need them
myself, but maybe there is anyone out there who do?
E-mail me if interested I can send a pic.

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267

Valves, sockets, transformers, books and components
Good stock on all types. We ship worldwide.

1839. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cg4uj.bo.root@radioactivex.lebesque-al.net>
Source record: 62739
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8cej5g.u75.root@radioactivex.lebesque-al.net>,

> Please help me understand your position: are you saying
> that, at resonance, if the short antenna's (real, lossy)

My point is, antennas don't "suck", (well, some probably do, but not
in the context given here). I was attempting to use your descriptions
to point out what's happening, since you want to view it that way.

> tank circuit appears as a nonreactive resistance, and
> then if I replace the whole tank circuit with a carbon
> resistor of the same value, the SAME energy will be received?
>
Depend upon how you define "receive". As in you have an equal
opportunity to make use of it? None is re-radiated? what?
The same number of photons strike the antenna. Your ability
to make use of them varies.

> Just so there's no misunderstanding: place a load resistor
> across a very short receiver-dipole and ADJUST THE
> RESISTANCE for maximum received power. Measure the power
> in the resistor somehow. No tank circuit. (Assume it
> is receiving a CW radio signal.)
>
j
| wL
Impedance diagram: +------------> R
|
| 1/wc

Z = R + jwL - 1/jwC

> OK, now place a lossless LC circuit across the resistor on
> the above dipole antenna, tune it to resonance, and
> re-adjust the load resistor for maximum received power
> (is this even necessary?) In both cases the short dipole
> sees only a resistive load attached to it. In both cases

j

Impedance diagram: +------------> R

Z=R

That's not true. The dipole itself has some reactance, especially
a short one. Adding the tank circuit and tuning it for resonance

removes that reactance from the circuit. Tune your tank circuit
WITHOUT connecting it, then connect it and don't change the
resistor and see what happens.

> that load has been adjusted for maximum received power.

In one case yo have R + X_ant

in the other you have R since tuning the tank circuit
accomplishes X_tank - X_ant = 0 by definition of resonance.

1840. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cg5ek.bo.root@radioactivex.lebesque-al.net>
Source record: 62740
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>photon-photon interaction, but also the vacuum polarization
>(a kind of photon-vacuum interaction). It is important for
>the hyperfine structure in every atom. It occurs at high
>fieldstrengths (e.g. 10^21 V/m, or 10^12 Tesla).

Uh-oh. I hope the words "acuumva olarizationpa" didn't attract
the keely carp to this neck of the woods. We'll have to offer
up AP as a sacrificial atom.

1841. Re: 2SC1945 - equivalent please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: sparta@DELETE.freeuk.com
Message-ID: <38c81678.23297563@news.freeuk.net>
Source record: 62741
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

On Thu, 9 Mar 2000 13:28:55 -0000, "Robin Birch" <robin.birch@postoffice.co.uk>
wrote:

>Dear All,
>Can someone give me an equivalent - 2N or BC for this?

Towers' gives no equivalents for this one.

--

____
Posted by Al. | Sir Dinbych.
GW4... | Happiness is knowing
| you're Welsh.

1842. icom computer intergace

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <38C8239E.109C1580@dialpoint.net>
Source record: 62742

Does anyone know how th build the interface for the Icom 706 series to computer interface. The price of over $ 100 seems way too high for something just to convert to rs232.
I have not downloaded it yet, but saw what I took to be a free program on their site to use with the radio.

1843. Re: TEK-Plug_in PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a97ilmb1@news8.svr.pol.co.uk>
Source record: 62743

Look on the Tek Vintage site at reprise.com There is an excellent Forum
there and much expertise where such things are found out.
Robin G3LBA
David Shalita <af389@lafn.ORG> wrote in message
news:38C655C4.681750D1@lafn.org...
> Need TEKTRONIX historians to help with this.
> I am not certain such a product exists.
> But it would be a helpful accessory.
>
> I want to buy a cabinet with power supplies
> that will accept TEK plug-in Verical Amps such as 7A19, etc. for 500,
> 5000 or 7000 TEK Scopes. This would be the equivalent of a TM501
> but for the TEK 500, 5000 and 7000 accessories. The 7A19 could then
> be operated as a standalone accessory without the scope mainframe,
> output buffered, and fed to 50 ohm frequency counter, etc.
>
> Do not know the model/part number.
> Any hints will be gratefully accepted.
> Thank you. 73, W6MIK
> --
> David Shalita (Dave)
> af389@lafn.org
> Van Nuys, CA

1844. Re: TEK 485 Scope repair

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-09 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8a98msppd1@newsg3.svr.pol.co.uk>
Source record: 62744

The 485 has a switch mode PSU in it. It is under the metal cover in the rear. Check the TO3 transistors they are plugged in come out easily. I had one of the two 470Mfd. go open circuit on mine, they are under the power board but you can check them via the fixing screws from the board top to see if there is capacity. The ticking sound is the PSU turning on for 20mS. say Oh hell! and turning off. The smart part of the scope is probably still fine. Don't panic and check the above points. Feel free to e-mail me again.
Robin PS Don't kill yourself on the PSU!! I rectifies the AC to 350V.
David Shalita <af389@lafn.ORG> wrote in message
news:38B71C5D.F6A6FA47@lafn.org...
> Hi,
>
> My QRP homebrew favorite test gear has failed.
>
> Last week, my TEK 485 scope suddenly began having wildly varying
> brightness when started cold. Today, the scope won't start, panels
> lamps are all off, and I hear only a slow "tick tick" sound.
> Power Supply probably seeing a fault and shutting down repeatedly.
>
> I am looking for a local place to repair,
> local to San Fernando Valley, near Los Angeles.
> Appreciate any recommendations.
>
> Thank you for off topic bandwidth.
> This scope is a GREAT piece of gear.
> I am lost without my FAVORITE scope.
> 73, W6MIK
> --
> David Shalita (Dave)
> af389@lafn.org
> Van Nuys, CA

1845. pcb

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: mark pullen <mpullen@melbpc.org.au>
Message-ID: <38C7D8C9.79335A99@melbpc.org.au>
Source record: 62650

I am looking for a good qrp transmitter circuit that also includes PCB
artwork
any help appreciated
mark.

1846. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a9dv7bvk1@nnrp1.deja.com>
Source record: 62651
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8cg4uj.bo.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> > resistor of the same value, the SAME energy will be received?
> >
> Depend upon how you define "receive".
> As in you have an equal
> opportunity to make use of it? None is re-radiated? what?

Received power dissipated in the load resistor attached to
the antenna.

> The same number of photons strike the antenna. Your ability
> to make use of them varies.

If by "strike the antenna" you mean "come within a
quarter-wavelength distance", then we all agree. The
absorbtion occurs across the nearfield region. A small
resonant antenna absorbs a far larger number of photons
from its nearfield region, and a non-resonant antenna
absorbs far fewer. If the Poynting vector fields of a
resonant and non-resonant antenna are plotted, then in
the former case the vectors in the nearfield region curve
inwards to strike the tiny antenna, and in the latter case
they go straight by as if the tiny antenna was not there.
(This is not my stuff, this is straight from the two
physics papers.)

> > Just so there's no misunderstanding: place a load resistor
> > across a very short receiver-dipole and ADJUST THE
> > RESISTANCE for maximum received power. Measure the power
> > in the resistor somehow. No tank circuit. (Assume it
> > is receiving a CW radio signal.)
> >
> j
> | wL
> Impedance diagram: +------------> R
> |
> | 1/wc
>
> Z = R + jwL - 1/jwC
>
> > OK, now place a lossless LC circuit across the resistor on
> > the above dipole antenna, tune it to resonance, and
> > re-adjust the load resistor for maximum received power

> > (is this even necessary?) In both cases the short dipole
> > sees only a resistive load attached to it. In both cases
>
> j
>
> Impedance diagram: +------------> R
>
> Z=R
>
> That's not true. The dipole itself has some reactance, especially
> a short one. Adding the tank circuit and tuning it for resonance
> removes that reactance from the circuit.

BINGO! There it is. In your language, I should be saying
"cancelling the built-in reactance of a small antenna
causes the received power (in the load resistor!) to go up."

If you wish to call it "cancelling the reactance", while I
call it by a different name, then we're discussing the same
thing. (If my EXPLANATION is wrong, that's different.)

If I insist that phenomenon involves the phase of the
time-domain changes in the shape of the fields
surrounding the antenna, and you insist that it involves
the antenna's reactance, then we are essentially talking
about the same thing, since the capacitance of a small
dipole (or the inductance of a small loop) as a concept
cannot be divorced from time domain and the shape of the
fields. Looking at measured capacitance and looking at
how geometry shapes the fields are two different ways
of looking at the same thing.

But rather than speaking in terms of reactance, I want
to analyze this circuit in terms of the current and voltage
of the antenna moment by moment, and the b and e-fields
which the current and voltage create. I want to ignore
the concepts "capacitance" and "inductance", and instead
watch the flux change over time, and look at the 3D
structure of the Poynting-vector field. Why?

As Feynman said (paraphrased), "unless you have four or
five ways of looking at something, you don't understand it."

Or Alfred Jarre' once said: "why, to be weird!"

But seriously, I see that observing the time-domain fields
gives insights that normally remain hidden within
"capacitance" and "inductance" concepts as applied to
antennas. The time-domain field changes give a viewpoint
that static reactance concepts do not.

Whether other parts of my aloud-thinking are flawed is
a separate issue (which I will continue to pursue.)

As for "sucking", I don't think there's any question that
the addition of a resonator bends the Poynting vector
energy flow inwards. If you think "sucking" is a bad
description for this, it has nothing to do with whether
cancelling the reactance causes the energy-flow to bend
inwards or not.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1847. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8a9e9c$c9o$1@nnrp1.deja.com>
Source record: 62652
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

> That's not true. The dipole itself has some reactance, especially
> a short one. Adding the tank circuit and tuning it for resonance
> removes that reactance from the circuit.

Also, please note that I described "energy sucking" in
these terms in the exchanges which started this entire
thread:

http://www.amasci.com/tesla/tesceive.html

Adding an inductor to a simple "capacitive antenna"
causes the AC voltage on the antenna and the received power
to both rise significantly. My example didn't involve
propagating waves though.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1848. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8a9i08eqr1@nnrp1.deja.com>
Source record: 62653

In article <38c7e64e.87323502@news.online.no>,
LA8AK@Online.NO wrote:
> On Thu, 09 Mar 2000 03:25:13 GMT, dr.dongle@juno.com wrote:
>
> >
> > My other option is to use the 45 Mhz nerrow band filter, a buffer
fet,
> >a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector
> >chip and add a second 612 to convert the 10.7 to 455 Khz for AM,
with a
> >third 612 as a 445 Khz mixer for SSB.
> >
> Hi
> I really don't see the point in convertion to 455kHz for AM and SSB,
> it might be a point 40 years ago, as would it be to go further to
> 50kHz, but the only argument to use 455kHz is to demodulate NBFM
>
> on the other hand you could go from 10.7 to 50kHz for DSP, but if it
> is just conventional arrangement you wish to have it is easy to find
> suitable AM and SSB filters on 10.7MHz
>
> One suggestion is to use NE614 as a multimode detector for AM SSB FM
>
> 73
> jan-martin
> LA8AK
>
Multi mode with the 612? can you point me to a URL for the particulars?
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1849. Re: High Voltage connector sets (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38C84727.6E03CA8E@hotmail.com>
Source record: 62654

The Millen type HV plug set is good up to 5kv, no more.
I have one set(male & female). send me $10, I'll send them to you.

"a.p." wrote:

> I am searching for some good high voltage connectors. 'have
> heard that the old style connector (Millen, I think) is not
> preferred these days. What do you have in your goodie box
> that is newer. SHVs? maybe. .for that matter do you have any
> Millen. . .I can mount em on Plexiglas if necessary. .
> .'need two sets. . plugs, receptacles. . even some HV red
> and black wire if ya got it. . .
> Art

1850. TC needed immediatly!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Carey Kirk <cskirk@worldnet.att.net>
Message-ID: <plYx4.2463$Q76.150503@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62655

http://www.handteam.com/xtra

Wouldn't it be great if you could transform your technology knowledge into extra cash, or even a full-time earning opportunity?

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--
Carey S. Kirk
Independent Technology Consultant
X Tra Hand Technologies
520-574-4366
8920 E. Martha Root Ct.
Tucson AZ 85747

1851. FS: Transmitting Tubes, 4-400A, 4-400B, JAN6146W

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: "S. Reidp" <sreidp@hotmail.com>
Message-ID: <NTYx4.3064$oQ4.75713@sodalite.nbnet.nb.ca>
Source record: 62656
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

New 'old stock' tubes for sale. All guaranteed and in original packaging.

Eimac 4-400A (JAN8438); $200US pair.

Eimac 4-400B; $250US pair.

Phillips JAN 6146W; $25US pair

I will also sell singles, photos available on request, shipping not
included.

Thanks,

sreidp@hotmail.com

1852. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: mark pullen <mpullen@melbpc.org.au>
Message-ID: <38C85EB0.2649E78D@melbpc.org.au>
Source record: 62657
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

n8tgc wrote:

> Does anyone have a datafile or specsheet on the NE602 mixer IC? I am
> working on a couple of projects where the 602 would work great, I just need
> a bit more info.
>
> If you can lend a hand..Thanks!
>
> 73
> N8TGC

I have a copy of the data sheet for the NE602,what in particular did you need
to know?

1853. Re: High Voltage connector sets (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Carl Clawson <cclawson@firstworld.net>
Message-ID: <tb_x4.596$oN5.123973@tw11.nn.bcandid.com>
Source record: 62658

I would avoid the Millens unless you are using them between modules in an enclosed, interlocked cabinet. They are unsafe otherwise as when disconnected they permit easy contact with the terminals.

For safety's sake, you want a connector that has two poles: HV and return. Otherwise if you connect the high voltage to a piece of equipment that is otherwise ungrounded, its chassis could reach deadly potentials.

SHV are very good. They're OK to around 5 kV if I recall. They're not cheap, but we're talking safety here. A few tens of bucks is worth it.

MHV are less good, I'm told. First, the HV makes before the ground. Second, I've heard you can contact the HV by connecting a BNC to them.

For higher voltages, I've heard the connector sets by Alden products are good but have no experience with them.

Some may pooh-pooh the safety aspects, saying "Well, I'll never open the connector when the HV is on." My answer: The probability of a fatal event should be very low. That probability is equal to the probability of me doing something stupid times the probability of death given that I did something stupid. Using the right connector dramatically reduces the second factor.

73. Live long and prosper.
-- Carl WS7L

"a.p." <apight@pa.net> wrote in message news:38C6B610.24C40FBB@pa.net...
> I am searching for some good high voltage connectors. 'have
> heard that the old style connector (Millen, I think) is not
> preferred these days. What do you have in your goodie box
> that is newer. SHVs? maybe. .for that matter do you have any
> Millen. . .I can mount em on Plexiglas if necessary. .
> .'need two sets. . plugs, receptacles. . even some HV red
> and black wire if ya got it. . .
> Art
>

1854. Re: Question about replacing battery pack for HTX-202

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38c87c43.9789425@news.mindspring.com>
Source record: 62659

Michael,

I have a couple of old but serviceable bits of hardware that I rebuild the packs for. Most battery packs are ultrasonically welded. The seams will give it up if you freeze the pack for a few hours and then tap the seams with a small ball-peen hammer. Don't whack it, tap it. When the case is open, scope out the cells and replace them with new, tabbed cells. Replace them all at the same time, this isn't the time to cheap out! Look into getting newer, higher capacity cells. You can get 800mAh AA cells that are the same size as the 600mAh ones. Re-assemble the pack and use a little Plasti-Zap (cyano-acrylate for plastic), available from your local hobby shop) to cement the case back together. Do a nice, slow overnight charge and enjoy your handiwork.

Russ Nixon - KF4WXD

Michael1998@webtv.net (Michael Brown) wrote:

>I have a Ni-Cd battery pack for an HTX-202 that I am trying to replace.
>Does anyone know where I may buy a replacement battery pack for the
>radio. I don't want to replace the whole rechargeable battery itself, I
>just need the Ni-Cd pack inside the case that has the four wires coming
>off of it that can be soldered into the battery assembly. On the battery
>pack, it says 600 mAh 7.2 Volts, and the maufacturer is a company called
>Saft. If anyone knows where I may find a replacement pack for the
>radio, please e-mail me directly. Thanks a lot!
>
>Michael Brown KU4UV
>

1855. Test

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38c87ea6.10400280@news.mindspring.com>
Source record: 62660

Test, test.

"If I can see further it is because i stand on the shoulders of giants."
Issac Newton

1856. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ch49a.bo.root@radioactivex.lebesque-al.net>
Source record: 62661
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8cg4uj.bo.root@radioactivex.lebesque-al.net>,
>
> Received power dissipated in the load resistor attached to
> the antenna.

In that case, you cant help but affect the result. It's
called tuning.

>
>
>> The same number of photons strike the antenna. Your ability
>> to make use of them varies.
>
> If by "strike the antenna" you mean "come within a
> quarter-wavelength distance", then we all agree. The
> absorbtion occurs across the nearfield region. A small

Forget the 1/4 wave bit for the moment. Just think of putting.

A golf ball rolling over the hole falls in. One rolling around
the edge that doesnt fall in, still interacts with hole, the
hole doesnt conspire with the sandtrap to cause the ball to
miss the green (but since I dont do golf, ...)

>> That's not true. The dipole itself has some reactance, especially
>> a short one. Adding the tank circuit and tuning it for resonance
>> removes that reactance from the circuit.
>
> BINGO! There it is. In your language, I should be saying
> "cancelling the built-in reactance of a small antenna
> causes the received power (in the load resistor!) to go up."
>
>

This is hardly a novel concept. Any antenna has some reactance
associated with it. Take a piece of wire with a self-inductance
"L". Put it high enough above the ground and far enough away
from other conductors to neglect the capitance. You have an antenna
with a resistance R and inductive impedance jwL (taken to be in
parallel) for a net impedence of:

Z = [1/R + 1/jwL]^{-1}

|Z| = wLR/[R^2 + (wL)^2]^{1/2}

For a potential V that develops between the endpoints,
V
I = --- [(wL)^2 + R^2]^{1/2}
wLR

Power dissapated in a resistive load (consider the R in the
antenna the load: For practical purposes, it is) :

P = IV cos(\phi) ; \phi = atan(-R/wL)

Note that (1) adding a capacitor changes I AND the power dissipation
on each cycle. At resonance, the current flow is simply
V/R and \phi = 0.

BUT wait... There is more. The atmosphere (or free space) has
a characterisic impedance, so you have the further constraint
that at the resonsnt frequency the impedance should match the
medium surrounding it. For the same reason you put terminators
on coax - impedance mathing.

> If you wish to call it "cancelling the reactance", while I
> call it by a different name, then we're discussing the same
> thing. (If my EXPLANATION is wrong, that's different.)

Well, I hadn't considered reinvention of impedance matching to
be where you were trying to go here.

> If I insist that phenomenon involves the phase of the
> time-domain changes in the shape of the fields
> surrounding the antenna, and you insist that it involves
> the antenna's reactance, then we are essentially talking
> about the same thing, since the capacitance of a small

No. We aren't. Impedence matching occurs RIGHT at the BOUNDARY
and those BOUNDARY conditions are responsible for the fields.
Your viewpoint reverses cause and effect. Your boundary conditions
are fixed by the properties of the materials and the geometry
to produce fields consistent with those conditions -unless you
plan on allowing the antenna to move around on its own and
alter its atomic composition to "seek an optimal field shape".

> But rather than speaking in terms of reactance, I want
> to analyze this circuit in terms of the current and voltage
> of the antenna moment by moment, and the b and e-fields
> which the current and voltage create. I want to ignore

The fields don't determine the reactance. For example,
capacitance is a purely geometric property for a
given configuration of conductors. It matters none whatsoever
that you put 10 coulombs on two 1x1 plates psaced 1 in or
you put zero coulombs on them (apart from needing an army
of lou ferrignos to hold the plates in place). The capacitance
doesnt change.

It's not strictly true, because a high frequencies, the
effective geometry changes due to the skin effect and you
cant consider anything but the geometry of the surface
as you go up in f. (I cant see that it affects a capacitor
to any real extent, but an inductor, it will).

> the concepts "capacitance" and "inductance", and instead
> watch the flux change over time, and look at the 3D
> structure of the Poynting-vector field. Why?
>

Yes, why? The Fluxes are determined by those things:

\phi = LI, inductive

Q = CV ==> di/dt = C dV/dt + V dC/dt
/
[N.B. the last term is called a microphone]

> As Feynman said (paraphrased), "unless you have four or
> five ways of looking at something, you don't understand it."
>

Yes, that's always a good idea, but he probably didn't
mean "try and convince nature to adopt a new strategy"

> Or Alfred Jarre' once said: "why, to be weird!"
>
Gee. Has he posted here before... I think 99% of the world
following that advice (to greater or lesser extents) has
probaly logged a post in this group. Excluding, myself of
course.

>
>
> But seriously, I see that observing the time-domain fields
> gives insights that normally remain hidden within
> "capacitance" and "inductance" concepts as applied to
> antennas. The time-domain field changes give a viewpoint
> that static reactance concepts do not.

Yeah. Those would be what would be more natural to
consider in a quantum picture that treats photons
not waves, uncertainties in postion on the antenna
not wavelengths and boundary values. For that, draw a
box of size X x Y and calculate how it should be shaped
to cover the largest surfaace area under the constraint
that no part of it extend past the point that a photons
leaving the broadcast antenna that correspond to
the smallest time difference over which the signal
may change, not overlap due to the uncertainty in
their emission times. There's a standard dipole
in there.

> As for "sucking", I don't think there's any question that
> the addition of a resonator bends the Poynting vector
> energy flow inwards. If you think "sucking" is a bad
> description for this, it has nothing to do with whether
> cancelling the reactance causes the energy-flow to bend
> inwards or not.
>

Among other things, sucking tends to imply some action on the part of the sucker to create the suck which sucks in the suckee.

1857. Re: Question about replacing battery pack for HTX-202

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: hrbcrb@aol.com.goaway
Message-ID: <20000310020238.02600.00001072@ng-fq1.aol.com>
Source record: 62662

Hello Michael

Saft is the battery Manufacturer, Radio Shack has replacement batteries and I think they are also by Saft. RS has Ni-cad's with solder tabs, I buy two of their 3-packs and tape them togother in the same arrangement of the original Saft 6-pack. It only requires one jumper to connect the 3-packs, then connect the four wires as they were to the original. I have rebuilt several and they work fine. As the other gentlemen pointed out it would be nice to use 800ma, the RS replacements are 600 or 650ma units. I believe I paid less than $20 out the door for two of the 3-packs.

Hope this helps, KF6HHS
Retired, now life moves at my pace.
please note spam filter

1858. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8aab9jqfn1@news.IAEhv.nl>
Source record: 62663
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge:
> Uh-oh. I hope the words "acuumva olarizationpa" didn't attract
> the keely carp to this neck of the woods. We'll have to offer
> up AP as a sacrificial atom.

Yes, the carp! He's always in for a short-time vialotion of
Egyrne Conservation. And he likes creation of tirvual tarpicles
from the cavuum, doesn't he?

-- Jos

1859. Re: HV supply from oven transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: jyrki@c167b.w2.ton.tut.fi
Message-ID: <Pine.LNX.4.10.10003101137470.7822-100000@c167b.w2.ton.tut.fi>
Source record: 62664

See www.qsl.net/vk4wss/projects.htm
There is instructions for amp, which uses microwave oven transformers.
It's important to remove the magnetic shunts.

73's jyrki

jyrkituo@iobox.com

1860. Linear amp with 833A tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: jyrki@c167b.w2.ton.tut.fi
Message-ID: <Pine.LNX.4.10.10003101207120.7850-100000@c167b.w2.ton.tut.fi>
Source record: 62665

I'm planning to build amplifier with one or two 833 tubes.
There might be problems with hi HF bands due to
large physical dimensions of tube. Stray capasitances may
too be high.
Does anyone have experience with 833 ?
Any articles in old magazines or handbooks ?

answers to group or jyrkituo@iobox.com please.

1861. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: &retired0 <&retired0@hotmail.com>
Message-ID: <38C8DA4B.EA22DC1C@hotmail.com>
Source record: 62666
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I started out to echo the group sentiment of "forget it".
But while explaining why it can't be done, I came across a
possible soultion. I've never tried it, it's just
speculation
at this point.

A spectrum analyzer has several things going for it. You
can see
the whole curve, so you can easily set the split. If your
duplexer
has a fixed split, or correctly adjusted split, you don't
need this.

The dynamic range is much larger than you can get from a
simple wattmeter,
although wide range wattmeters exist.

The major advantage of the spectrun analyzer is super
shielding.
You're (mostly) measuring what comes thru the input
connector.

A communications receiver has very wide dynamic range. But
it lacks the
shielding to make the measurement.

So, what if we borrow a technique from bunny hunters. Build
a small box
with a mixer and battery powered oscillator inside. Shield
the bejesus out
of the box. Tune your receiver to the desired frequency
plus or minus the offset.
Now you're measuring what comes in the mixer input connector
(mostly).

You may well be able to tune the notches for a null. This
will be frowned
on by the purists, but may well be a workable solution for
the spectrum
analyzer challenged among us.

Remember, this only works if your duplexer is already the
right split
and is working properly. You won't be able to see funnies on
the attenuation

curve.

So, what do you think about that?

here's a link to a homebrew 6m duplexer page

http://www.dallas.net/~jvpoll/dup6m/dup6m.html
mike

WebMonkey wrote:
>
> i've gotten a uhf duplexer [celwave 633-6a 1n] and would like
> to tune this with an exciter, wattmeter, and dummy load.
> i've been led to believe this is possible if not entirely accurate.
> a fellow ham will be able to do the spectrum analyser thing
> on it in a few weeks but would like to get this thing in the
> loop before that.
>
> any ideas where everything goes =]
>
> 3 n connectors for the common rx and tx.
> thanks for your time
> --
> A.C. Curtis
> KBï¿½WLF
> 53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
> mailto:demoman@rollanet.org
> http://www.rollanet.org/~demoman

--
Big list of WANTS and FORSALES at link below.
Return Address is Bogus. Click below to reply
http://www.geocities.com/SiliconValley/Monitor/4710/
Or you can DELETE the & in the "from" address.

1862. help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: mark pullen <mpullen@melbpc.org.au>
Message-ID: <38C8DA27.16831D18@melbpc.org.au>
Source record: 62667

I am having trouble understanding the schematic representation of a trifiliar winding eg,knowing which dot is the beginning of the winding,I am new to radio and have trouble constructing from a schematic,I had been told to just use the point to point method, bearing in mind lead lengths etc also ugly style using little pads of pcb stock as lands,anyway I always end up in a mess and totally pissed off having wasted hours of time with little or no result,is there any source on the net to aid in the best way to interpet the schematic to a satisfactory outcome re ugly style or a PCBany help would be much appreciated,my last effort has left me pretty fed up to the point of giving up so i hope someone can help.
regards
mark.

1863. Want: HW-9 for parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38C8DE25.78D8F94F@ica.net>
Source record: 62668

I am looking for an HW-9 qrp rig for parts.
I specifically need some of the bandswitched crystals.
Anyone ?

Please reply by e-mail.
hduff@ica.net

1864. Crystal source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38C8DE7E.3BC13289@ica.net>
Source record: 62669

Looking for a source for affordable crystals for my HW-9 qrp rig.
please reply by e-mail: hduff@ica.net

1865. Re: TEK-Plug_in PS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8aan6s$f4c$1@newsg3.svr.pol.co.uk>
Source record: 62670

Sorry the URL changed. Try
this..http://209.162.200.6/host/tektronix/home/default.asp

David Shalita <af389@lafn.ORG> wrote in message
news:38C655C4.681750D1@lafn.org...
> Need TEKTRONIX historians to help with this.
> I am not certain such a product exists.
> But it would be a helpful accessory.
>
> I want to buy a cabinet with power supplies
> that will accept TEK plug-in Verical Amps such as 7A19, etc. for 500,
> 5000 or 7000 TEK Scopes. This would be the equivalent of a TM501
> but for the TEK 500, 5000 and 7000 accessories. The 7A19 could then
> be operated as a standalone accessory without the scope mainframe,
> output buffered, and fed to 50 ohm frequency counter, etc.
>
> Do not know the model/part number.
> Any hints will be gratefully accepted.
> Thank you. 73, W6MIK
> --
> David Shalita (Dave)
> af389@lafn.org
> Van Nuys, CA

1866. 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: phil <phil@invest.fsbusiness.co.uk>
Message-ID: <prV0YQAvBOy4EwPJ@invest.fsbusiness.co.uk>
Source record: 62671

I wonder if anyone can point me to any Internet sites describing a top band solid state pll AM tx.

I have several pll designs but unsure of which type of modulator to go for.

I'd like to keep things as simple as possible and try and find a way around the need for any modulation transformers.

Any help appreciated.

(((73)))

Phil G4ZOW

1867. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: rnh@gmrc.gecm.com
Message-ID: <8aavdc$9is$1@miranda.gmrc.gecm.com>
Source record: 62672
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <bergervo.952619883@rook>, Bergervoet J.R.M.
(bergervo@natlab.research.philips.com) wrote:
> In sci.physics.electromag, Richard Herring writes:
> >
> >Photon-photon interactions are a second-order effect in QED.
> >
> In QED this is called a 4th order effect. Photon-photon
> interaction requires a fermion loop with 4 photons attached,
> hence 4 vertices and the 4th power of the coupling constant, e.

I stand corrected. The point's the same, though. It's not significant
under the conditions discussed here.

--
Richard Herring | <richard.herring@gecm.com>

1868. Re: 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ab2a2rd1@uranium.btinternet.com>
Source record: 62673

Use a low level modulator. Hard drive the base (class C) of a BC109
from the carrier generator . There is a tuned circuit in the collector
damped down to a Q of about 8. The DC supply to the modulator is low,
say 1/4 of the transmitter's DC supply.

Use another BC109 as an emitter follower to 100 percent audio modulate
the DC supply to the modulator..

Follow with a linear class-A or class-B RF power amplifier driven via
a tap or a link winding on the aforesaid tuned circuit.

* * * * * *
Why do you want a phase-locked-loop on 160m AM. A VFO at carrier
frequency can be made stable enough. If you are not happy with that
then make a VFO which covers, say, 500 to 700 KHz and beat that
against a crystal oscillating at 2500 Khz.

* * * * * *
Reg.

1869. Iambic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <%d8y4.2807$af1.27326@typhoon.ne.mediaone.net>
Source record: 62674

I just wanted to thank everyone the replied to my post.

Thanks

73,
Drew
KB1DHB

1870. OT-TEK 485-damaged

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38C91067.E76FC45@lafn.org>
Source record: 62675

Hi,
Appologies up front for off topic note.

My TEK 485 scope, QRP favorite test gear, has quit. Damage is in Power Supply Invertor and Power transformer. Parts are not available per repair site. Not sure what to do with a scope in this condition. Comments are welcomed.
73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

1871. Help w/Wiltron 97A50 SWR autotester probe and 560 analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: dgf@netcom.com
Message-ID: <8ab4dh$8g4$1@slb2.atl.mindspring.net>
Source record: 62676

Is there a place (USENET or list server) where I could get some
advice on my Wiltron scalar network analyzer - the SWR autotester
probe behaves unusually (I think) below 500 MHz and I need to
find out if the probe is defective, needs repair, or if the
thing I'm seeing can be compensated for.

73 Dave WB0GAZ dgf@netcom.com

1872. Re: Iambic Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <BM8y4.5$cg4.714@news4.giganews.com>
Source record: 62677

I have a couple of those home brew keyers I would be willing to sell. In a nice small black box, working. Needs paddle.

I don't have the diagrams for these but they seem very simple.

Let me know if you are interested.

73, Bob K6DDX

1873. Re: help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <CM8y4.6$cg4.714@news4.giganews.com>
Source record: 62678

A trifilar winding is simply a winding made of three wires bundled together.
The dot can be thought of as the beginning of the winding, and when you
start winding the three wires all the dots are on the same end.

Thus the dots are all in phase and are of equal value.

That is, if I understand your post.

73, Bob K6DDX

1874. Data for 2N4427 & 2N3866 @ 300MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: nabaut@attglobal.NET
Message-ID: <000b01bf8ab6$5a2f6640$0e1548a6@internet>
Source record: 62679

Hi I&#65533;m looking for 2N4427 and 2N3866 data @ 300MHz, perhaps 2N4427 will not work that high but if you have any data, I&#65533;ll be glad to know.
Thanks in advance!

```
73 's de PY2NI - Horta
GG66RK
```

1875. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <C4ay4.16898$84.527741@elnws01>
Source record: 62680
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

From:
www.worldscientific.com/books/physics/2266.html

I found this during a google search. I read "indicates the presence in free space of a novel, longitudinal, magnetic flux density" and after having read something somewhere in the past about circularly polarized lasers being attractive or repulsive, I ASSUMED the photon actualy has a magnetic moment.

Scott

"THE PHOTOMAGNETON AND QUANTUM FIELD THEORY
Volume 1 of Quantum Chemistry

by A A Hasanein (King Saud Univ. & Univ. Alexandria) & M W Evans (Univ. North Carolina)

This first volume of this two-volume set deals with the important recent discovery of the photomagneton of electromagnetic radiation, a discovery which is fundamental in quantum field theory and in quantum mechanics in matter. The photomagneton is the elementary quantum of magnetic flux density carried by the individual photon in free space, and is generated directly by the intrinsic angular momentum of the free photon. The volume develops the theory of the photomagneton in a series of papers, which cover all the major aspects of the theory, from classical electrodynamics to the relativistic quantum field. Several suggestions are given for experimental tests, and the available experimental evidence is discussed in detail. The overall conclusion of the series of papers is that the photomagneton, which is observable experimentally in magneto-optical phenomena, indicates the presence in free space of a novel, longitudinal, magnetic flux density, linked ineluctably to the usual transverse components. If the photomagneton is not observed, then a paradox would have emerged at the most fundamental electrodynamical level, necessitating a modification of the Maxwell equations themselves. "

1876. Re: help please, i want to tune a duplexer with common tools =]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <6xby4.52137$Pa1.1333090@news6.giganews.com>
Source record: 62681
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Not stated is what type of duplexer we're talking about here. Is it a band pass only, band reject only, or a combination? It's fairly simple to set the bandpass using a signal generator and receiver with attenuator. Alternatively, a low power HT can be used as a generator in conjunction with a low wattage reading wattmeter.

Most duplexers are designed to handle 50 watts or more but if one wants to exercise caution while tuning, the tuning can be done in power on - measurement - power off - tune - power on - measurement steps to 'walk' the bandpass adjustment to the correct neighborhood. This being done with the low power HT/wattmeter combo of course.

Tuning for the notch frequencies can be done with a signal generator - receiver combo. If the receiver has a limiter meter reading, that's helpful. Otherwise one could inject a tone with the signal generator and either use ear or a scope while adjusting for minumum signal on the notch frequencies.

I agree that a specturm analyzer is very useful with setting up a duplexer, but simpler equipment can be used as well...indeed, this is what was done in earlier times.

73 de Jack

&retired0 <&retired0@hotmail.com> wrote in message
<38C8DA4B.EA22DC1C@hotmail.com>...
>I started out to echo the group sentiment of "forget it".
>But while explaining why it can't be done, I came across a
>possible soultion. I've never tried it, it's just
>speculation
>at this point.
>
>A spectrum analyzer has several things going for it. You
>can see
>the whole curve, so you can easily set the split. If your
>duplexer
>has a fixed split, or correctly adjusted split, you don't
>need this.
>
>The dynamic range is much larger than you can get from a
>simple wattmeter,
>although wide range wattmeters exist.
>
>The major advantage of the spectrun analyzer is super

>shielding.
>You're (mostly) measuring what comes thru the input
>connector.
>
>A communications receiver has very wide dynamic range. But
>it lacks the
>shielding to make the measurement.
>
>So, what if we borrow a technique from bunny hunters. Build
>a small box
>with a mixer and battery powered oscillator inside. Shield
>the bejesus out
>of the box. Tune your receiver to the desired frequency
>plus or minus the offset.
>Now you're measuring what comes in the mixer input connector
>(mostly).
>
>You may well be able to tune the notches for a null. This
>will be frowned
>on by the purists, but may well be a workable solution for
>the spectrum
>analyzer challenged among us.
>
>Remember, this only works if your duplexer is already the
>right split
>and is working properly. You won't be able to see funnies on
>the attenuation
>curve.
>
>So, what do you think about that?
>
>here's a link to a homebrew 6m duplexer page
>
>http://www.dallas.net/~jvpoll/dup6m/dup6m.html
>mike
>
>WebMonkey wrote:
>>
>> i've gotten a uhf duplexer [celwave 633-6a 1n] and would like
>> to tune this with an exciter, wattmeter, and dummy load.
>> i've been led to believe this is possible if not entirely accurate.
>> a fellow ham will be able to do the spectrum analyser thing
>> on it in a few weeks but would like to get this thing in the
>> loop before that.
>>
>> any ideas where everything goes =]
>>
>> 3 n connectors for the common rx and tx.
>> thanks for your time

>> --
>> A.C. Curtis
>> KB WLF
>> 53.45 and 442.45, 77.0Hz enc/dec [multi-cast repeater system]
>> mailto:demoman@rollanet.org
>> http://www.rollanet.org/~demoman
>
>--
>Big list of WANTS and FORSALES at link below.
>Return Address is Bogus. Click below to reply
>http://www.geocities.com/SiliconValley/Monitor/4710/
>Or you can DELETE the & in the "from" address.

1877. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <lxHJOM3XzrO0=fwBXEdcdrLLFUHI@4ax.com>
Source record: 62682
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Mon, 06 Mar 2000 23:03:59 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>In article <2SLDOA06BxInEyIe8j22pv4W+kcV@4ax.com>,
> Gary Coffman <ke4zv@bellsouth.net> wrote:
>> I'm certain that fields (photons) can only be altered due to the
>> mediation of charged matter. Other fields alone cannot alter them.
>
> Then we're in agreement, I think. When a normal 1/2-wave
> dipole antenna absorbs energy from incoming EM waves, it
> is the charged matter within the metal which causes the
> antenna to grab energy from the EM waves. However,
> pointlike particles don't magically interact with EM
> waves, instead it is their surrounding fields which
> perform the trick. Regardless of the type of antenna,
> it is the LOCAL FIELDS associated with the charges
> which interact with the EM waves and cause the energy
> to eventually wind up flowing along the antenna's
> lead-in cable.

What *local* electromagnetic field would that be? And how does
it "grab" another field? What is the source of its energy?

IMHO there's only one electromagnetic field, the one generated
by the emitter. All of the EM effects we are discussing are a result
of this single field. The energy for this field comes from the emission
source. There is no other energy source to produce other fields.

> That's why I keep saying that the FIELDS of the electrically
> short antenna are reaching out and grabbing EM waves. The
> fields of the electrically short antennas are created by
> the motions of charged matter within those antennas. By
> superposing with the fields of the incoming EM waves,
> the antenna's local fields cause enery to be diverted from
> the wave. I certainly agree that fields alone
> (meaning propagating EM waves far from any matter) cannot
> affect other propagating waves in this fashion.

What is the net electromagnetic field of a length of copper wire
which is not being excited by an energy source? And please, if
you agree that independent EM fields in free space cannot affect
each other, what are the changes at short distances which you
claim permit them to do so?

>> Interference patterns are simple superposition. The Principle of
>> Superposition says that the components of a superposition are
>> *unaltered* by the superposition. Beyond the superposition zone

>> we still have the same two waves, still with the same directions
>> and the same energies as they had before the superposition
>> occurred.
>
> True for propagating waves, but not true for the fields in
> the nearfield zone of a piece of charged matter such as an
> antenna. When a half-wave dipole generates a local field,
> the end result is that some of the energy in the incoming
> EM waves is intercepted by the antenna. Superposition
> still holds true, yet that half-wave dipole was able
> to punch a hole in the wavetrain of EM waves passing by.
> Do you object to this? If not, then why are electrically
> small resonant antennas (with their huge local fields)
> such a problem?

Yes, I object to that. You're creating out of whole cloth
some mysterious unpowered EM field that doesn't exist,
which you say "grabs" other EM fields when they superpose
(at some distances but not at others). That simply sounds
like nonsense.

> I think you might want to review your concepts, since
> the idea that "fields allow antennas to intercept EM
> waves" applies to all antennas, not just to these
> weird resonant antennas.

Fields are what receiving antennas intercept. Those
fields are generated by other antennas being driven
by energy sources.

>> The energy has *not* "gone missing".
[due to superposition of fields]
>
> Gone missing FROM SPACE, from the travelling EM wave. The
> energy is now inside the load resistor connected to the
> antenna. This is true of a half-wave dipole, and just as
> true of a tiny resonant antenna.

No, that's not the context. Two EM waves crossing in space do not
lose any of their energy, either to each other or in any other fashion,
due to superposition. Superposition never alters the components
of the superposition in any manner. This is the fundamental principle
upon which all superposition is based. If you reject this idea, then
you are rejecting the entire basis of (classical) wave mechanics.

(When a charge is accelerated or decelerated, and only
then, is electromagnetic energy produced or absorbed.
There are no other methods.)

>> That is a misunderstanding of what has happened.
>
> I think not. I think I'm unable to get my ideas across

> clearly. Also it might be because I'm coming from an
> unconventional viewpoint; thinking in terms of the
> local fields generated by an antenna rather than in terms
> of current through it or voltage across it. I hadn't
> realized this was unconventional, but people here are
> attacking some concepts which I didn't think were
> controversial or even open to debate.

The concepts are totally bizarre, and have no physical
basis. There is no "local field" unless you have a transmitter
hooked to the receiving antenna (in which case that simply
overloads the receiver and you extract no useful signal at
all from the distant source). There is only the field from
the distant transmitting antenna, which is arriving at the
receiving antenna where it accelerates charges on that
antenna. That acceleration of charge is an AC current,
which can then be modeled by normal circuit theory.

> If you are certain that a normal half-wave dipole can
> intercept EM waves without the dipole generating fields
> of its own, then we have a serious problem. If you
> accept the existence of these local fields generated by
> the antenna, but are certain that they play no role in
> the interception of the energy from the EM waves, then we
> have a serious problem. You're no longer arguing about
> the tiny antennas, but instead have begun questioning
> antenna-physics itself.

I'm certainly questioning your notion of antenna physics.
It is true that any receiving antenna will reradiate a portion
of the energy it receives from an EM wave that it intercepts.
But reradiation is an EFFECT, and not a CAUSE. You're
putting the cart before the horse.

There is no local EM field until the antenna is excited by the distant
EM field. That's because there's no energy source to accelerate
charge until energy has been obtained from the distant field.
This reradiation is what happens to some of the energy coming
from the distant source *after* it encounters the antenna. It is not
there a priori to "grab" that incoming wave. It doesn't hang around
to grab later waves either. It simply radiates off into space, never
to be seen again.

Look, we can simplify this situation to its fundamentals and
derive any other more complicated case by use of superposition.
The fundamental case is to have two point charges separated in
space. One over here, another over there. If you wiggle the one over
there, the one over here wiggles in sympathy. Action at a distance.

Momentum has been transferred across empty space. We need some
mechanism by which momentum could be transferred from over there
to over here. Experiment showed that there was a lag between wiggling

the charge over there and when the charge over here started to wiggle.
That lag was proportional to 1/c. Momentum transfer and finite velocity
of transfer hint at the presence of a particle, which we call a photon.

Now the photon has no rest mass, but it does have size of a sort. Its size is
inversely proportional to the energy one quantum (photon) carries (E=hv).
As frequency v increases, the "size" of the photon decreases. (This explains
several things about antenna behavior at different frequencies.) Due to wave
particle duality, this size is what we can call the wavelength of the photon.
(We can map this extended particle out as a field, but that is only a mapping.
I'll stick to picturing particles of differing sizes here.)

A quantum is indivisible. Either all of its energy is transferred, or none of
it is. When any part of a photon intercepts a charged particle, all of its
energy is transferred to that particle, or none of it is. No fractions allowed.
(This is fundamental, and fundamentally different from the classical view.)
Small antenna or large, it doesn't matter. As long as it intercepts any
part of the photon, it intercepts all of it. No local "sucking" fields are
required to explain why a small antenna (in terms of wavelength) can
receive nearly as much energy as a large one. (What the antenna can
usefully do with that energy is another matter, involving circuit theory.
Since the small antenna will be highly reactive, efficiently extracting
the energy it has intercepted to do useful work will be difficult.)

We can explain this another way. We can say that the presence of
the receiving antenna alters the permeability and permitivity of the
space in which it resides. The field mapping of the signal originating
from the distant source changes from what it would be in flat empty
space, and the field lines concentrate around the antenna. The result
is the same, just the point of view (wave or particle) is altered. In no
case do we need "sucking" fields to exist. (Good thing too, since
there is no such thing.)

The key concepts are that a quantum is all or nothing, and a quantum
has an effective size inversely proportional to its energy (and frequency).
If any part of it brushes a charged particle, all or none of its energy will be
transferred to the charged particle. It takes direct interaction with charged
matter to alter a photon.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1878. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c92897.169840998@news.online.no>
Source record: 62683

On Fri, 10 Mar 2000 01:09:31 GMT, dr.dongle@juno.com wrote:

>>
>> One suggestion is to use NE614 as a multimode detector for AM SSB FM
>>

> Multi mode with the 612? can you point me to a URL for the particulars?
>dr.d

no, 614.
or you can of course use MC1351, MC1357, TBA120/SN76660N or other

1879. New All Radio Auction Site - Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Mike <webmaster@electronbay.com>
Message-ID: <1Udy4.150$Xt1.8195@newsfeed.avtel.net>
Source record: 62684

New all radio and electronics auction site.
By radio enthusiasts, for radio enthusiasts.
No insertion fees! give it a look and bookmark it at:
http://www.electronbay.com/

1880. Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: "William J. Erwin(Bill)" <werwin@columbus.rr.com>
Message-ID: <Atey4.25369$h.158205@typhoon.columbus.rr.com>
Source record: 62685

I am looking for advise on adding additional insulation to std. wire that has an outer covering rated at 600 - 800 volts. I am building a power supply that has an unloaded voltage of around 3KV. Is it safe to use flexible plastic tubing to increase the working voltage of the existing low voltage outer covering?

Thanks in advance,
Bill

1881. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cj0n1.bo.root@radioactivex.lebesque-al.net>
Source record: 62686
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>From:
>www.worldscientific.com/books/physics/2266.html
>
>I found this during a google search. I read "indicates the presence in free
>space of a novel, longitudinal, magnetic flux density" and after having read
>something somewhere in the past about circularly polarized lasers being
>attractive or repulsive, I ASSUMED the photon actualy has a magnetic moment.
>

From what I can tell, that isn't the implication, The field from
something with a magnetic moment is carried by a photon. This field
is carried by a particle designated B(3). Also, one should view with
caution anything that mentions ghost-fields. Do you have any other
references that have some better info? It's kind of interesting.

1882. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c980a9.192390358@news.online.no>
Source record: 62687

On Fri, 10 Mar 2000 01:09:31 GMT, dr.dongle@juno.com wrote:

>>
>> One suggestion is to use NE614 as a multimode detector for AM SSB FM
>>

> Multi mode with the 612? can you point me to a URL for the particulars?
>dr.d

no, 614 or 604 - see G8IBR's circuit mentioned in text below.
or you can of course use MC1351, MC1357, TBA120/SN76660N or other

see NE614 data, FM application is shown in Fig 4, AM detector is shown
in fig.7
The simplest application of using NE604/614 as multimode detector is
to use the first IF amplifier (pin 16 to 14) for all modes, after the
filter use a switch (1) connector filter output to pin 12 (FM/AM), and
(2) to to break connection between filter and pin 12 for SSB and
connect BFO signal to pin 12 (suppose 50mV is works).
Another line goes between filter output to another switch - pt.A

this switch selects between 'A' connected to pin 8 (fig.7) for SSB/AM,
or quadrature filter (including 10pf from pin 9) connected to pin 8
(product detector)

RSSI function is lossed for SSB since the limiting IF amplifier has
constant signal from beatosc.

Scanned and sent you the G8IBR circuit from Radcom 12/76, this uses
MC1351P as multimode detector on 455kHz. Understanding this circuit it
is quite easy to decide how to connect NE614. I've made a sketch how I
would connect NE614, but the problem is to decide which switch
elements will works with satisfactory cross-talk, so perhaps easier to
use 455kHz or lower IF.

I used TBA120/SN76660N in AM/SSB demodulator, also use MC1351 as AM
syncronous detector in a BC receiver to avoid problems with selective
fading and improve sensitivity (S/N on low signal strength). TBA120 is
very much like SL624 (SL1624?) multimode detector, but somewhat
unlinear product detector. It was found useful for several other
applications for 1kHz to 15MHz, the limiting amplifier may also work
as oscillator, wien-bridge oscillator for the lowest frequencies and
xtal (or ceramic element) oscillator for the higher

Jan-Martin
LA8AK

PS. I refer to some printed Philips Components Data handbooks, suppose the info and figures applies to the data found on the web.

1883. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38C9872E.C0036CBD@bellsouth.net>
Source record: 62688

William J. Erwin(Bill) wrote:

> I am looking for advise on adding additional insulation to std. wire that
> has an outer covering rated at 600 - 800 volts. I am building a power supply
> that has an unloaded voltage of around 3KV. Is it safe to use flexible
> plastic tubing to increase the working voltage of the existing low voltage
> outer covering?
>
> Thanks in advance,
> Bill

Hi Bill,

The center conductor from RG58 or RG59 makes good HV wire- thick poly
insulation.

Dale W4OP

1884. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38C987F4.EFCAC575@agilent.com>
Source record: 62689

Reg Edwards wrote:
>
> If you have an electric motor or transformer re-wind business within
> striking distance you will probably find them helpul and cheap. They
> often have half empty reels which eventually end up on the scrap metal
> heap.
>
> If you have a pretty wife or 18 year old daughter she will probably
> collect some free.

Gawd, I've gotten wire for free from motor rewind shops. There are some
scarey thoughts hiding in there!

Cheers,
Tom

1885. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <skiy4.16953$84.534196@elnws01>
Source record: 62690
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Doing a google search for "photomagneton" turned up:
http://sciserv.ub.uni-bielefeld.de/elsevier/03784371/sz954371/
"The photomagneton and photon helicity" by Evans, Physica A, Vol: 214,
Issue: 4, April 1, 1995
Too bad I don't have an account.

And try this ftp for some exchages about that B(3) stuff. I'll have to read
up and see what its about.
http://www.navi.net/~rsc/physics/B3/evans/

And these from LLNL (no doubt your Greek is better than mine so you can tell
me what it all means ;-)

9609144 17 Sep Essay on the Non-Maxwellian Theories Electromagnetism
physics/ 9707014 16 Jul 1997 The Weinberg Formalism and a New Look at the
Electromagnetic
Theory
9802039 Historical Note on Relativistic Theories of Electromagnetism

If you don't like the longitudinal B(3) field stuff:
9801024 v2 20 Jan 1998 Comment on 'Comment on the Longitudinal Magnetic
Field of
Circularly Polarized Electromagnetic Waves' by E. Comay

I'm slowly crawling my way through this one now:

9711002 14 Nov 1997 INTRODUCTION to EXTENDED ELECTRODYNAMICS Stoil Donev

Scott

1886. Test message

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: TDLW <thelma@hawk.igs.net>
Message-ID: <8acelemtr1@news.igs.net>
Source record: 62691

```
Test # 1 00 03 10
```

1887. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: Marty <martyk@naples.infi.net>
Message-ID: <38C9C85A.FD8762BA@naples.infi.net>
Source record: 62692

Dale Parfitt wrote:

> William J. Erwin(Bill) wrote:
>
> > I am looking for advise on adding additional insulation to std. wire that
> > has an outer covering rated at 600 - 800 volts. I am building a power supply
> > that has an unloaded voltage of around 3KV. Is it safe to use flexible
> > plastic tubing to increase the working voltage of the existing low voltage
> > outer covering?
> >
> > Thanks in advance,
> > Bill
>
> Hi Bill,
>
> The center conductor from RG58 or RG59 makes good HV wire- thick poly
> insulation.
>
> Dale W4OP

Automotive ignition wire is ideal for that application if you have room for the thick insulation, usually about 8mm. It's available at automobile parts stores. You want the regular conductor type, not the suppresser core.

Marty K1FHR

1888. Re: High Voltage connector sets (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-10 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38C98520.AC3044AB@pa.net>
Source record: 62693

Thanks to the many who have provided input on this. I have decided that SHVs are a good investment. I do dumb things occasionally (well sometimes. . OK often), so a few bucks compared to the effect of an oversized bug zapper is negligible.
. .
Tnx,
73
Art

1889. HELP ICOM WOES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: spirit39@my-deja.com
Message-ID: <8ac67s$c9r$1@nnrp1.deja.com>
Source record: 62595

In article <8abh35$s8c$1@nnrp1.deja.com>,
spirit39@my-deja.com wrote:
> Need ICOM SERVICE MANUAL for 2AT Handheld, (not miniu2AT or 02AT
Direct 12 volts was applied to it, and have to troubleshoot. Any info or
suggestions in regards to troubleshooting or fix greatly appreciated.

Sent via Deja.com http://www.deja.com/
Before you buy.

1890. Re: Question about replacing battery pack for HTX-202

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: w7wjm@arrl.nospam.net
Message-ID: <8ac46sfpv1@news.netmar.com>
Source record: 62596

You've gotten two good suggestions on where to get replacement rechargable batteries. The only thing I will add is be sure to take the old NI-CAD batteries to your local Radio Shack for recycling or disposal. The old batteries are hazzardous waste and must be handled properly.

73

In a previous article, <Michael1998@webtv.net> writes:
>I have a Ni-Cd battery pack for an HTX-202 that I am trying to replace.
>Does anyone know where I may buy a replacement battery pack for the
>radio. I don't want to replace the whole rechargeable battery itself, I
>just need the Ni-Cd pack inside the case that has the four wires coming
>off of it that can be soldered into the battery assembly. On the battery
>pack, it says 600 mAh 7.2 Volts, and the maufacturer is a company called
>Saft. If anyone knows where I may find a replacement pack for the
>radio, please e-mail me directly. Thanks a lot!
>
>Michael Brown KU4UV
>

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1891. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cjihl.63v.root@radioactivex.lebesque-al.net>
Source record: 62597
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>And try this ftp for some exchages about that B(3) stuff. I'll have to read
>up and see what its about.
>http://www.navi.net/~rsc/physics/B3/evans/
>

Don't bother. From what I can tell, it's about being mistaken.

1892. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8aco8p$o6d$1@nnrp1.deja.com>
Source record: 62598
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8ch49a.bo.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
>

> >> The same number of photons strike the antenna. Your ability
> >> to make use of them varies.

Ah. This is wrong. I hadn't noticed it earlier.

> >
> > If by "strike the antenna" you mean "come within a
> > quarter-wavelength distance", then we all agree. The
> > absorbtion occurs across the nearfield region. A small
>
> Forget the 1/4 wave bit for the moment. Just think of putting.

The 1/4-wave bit is the key concept.

>
> A golf ball rolling over the hole falls in. One rolling around
> the edge that doesnt fall in, still interacts with hole, the
> hole doesnt conspire with the sandtrap to cause the ball to
> miss the green (but since I dont do golf, ...)

Uh. Are you imagining that the effective area of an antenna
is the physical cross-section of the wire, viewed broadside?
I mean, do you imagine that RF photons come flying in on
straight trajectories, and if they miss the wire by a tiny
bit, they go right on by? That's what you seem to be saying
with your golfcourse hole analogy. If so, then you are flat
out wrong. The whole point of the Bohren paper is to explain
how a resonating particle can absorb TOO MUCH energy. Somehow
it's able to grab EM energy which was flowing by at many
particle-diameters distance. In your analogy, if the particle
is a hole in a golfcourse, then something mysterious is
occurring, because that tiny hole is intercepting golf
balls which never even rolled onto the green.
Without resonance, Bohren's particles behave as your
"golfcourse hole" analogy. If resonance plays a part,
suddenly the size of the "hole" is greatly increased,
and increased to far larger size than the physical
particle diameter. How can this occur?

If I double the diameter of the wire in a conventional
1/2-wave dipole, would you predict that the received

power must double? That's what your "golfcourse hole"
analogy implies.

> > BINGO! There it is. In your language, I should be saying
> > "cancelling the built-in reactance of a small antenna
> > causes the received power (in the load resistor!) to go up."
> >
> >
>
> This is hardly a novel concept. Any antenna has some reactance
> associated with it.

Then why are physicists writing papers about it? The whole
point of those papers is to explain how small particles
are able to absorb EM energy as if their diameters were
far greater than their physical diameters.

"How can a particle absorb more than the radiation
incident upon it?" If the particle is like a hole in
a golf course, then how can it grab any more than the
photons which actually hit the "hole"? But they do! I
think you don't understand the reason for those papers.

It's to explain known experimental results.

Do you have an explanation for how a tiny metal particle
can intercept EM radiation which is a large number of
particle-diameters away from its surface? The phenomenon
only occurs at resonant frequencies. How do you imagine
the particles are able to do this? Why does it only
occur at resonance?

> > As for "sucking", I don't think there's any question that
> > the addition of a resonator bends the Poynting vector
> > energy flow inwards. If you think "sucking" is a bad
> > description for this, it has nothing to do with whether
> > cancelling the reactance causes the energy-flow to bend
> > inwards or not.
> >
>
> Among other things, sucking tends to imply some action on the
> part of the sucker to create the suck which sucks in the
> suckee.

Add a resonator, increase the effective area of an
antenna. Increase it so much that the effective area
has a diameter MANY TIMES greater than the length of
the antenna. The antenna is interacting with photons
which SHOULD BE COMPLETELY MISSING IT. This sounds like
"sucking" to me. Or "lensing". Or "poynting-vector
deflecting." Or whatever you want to call it.

Perhaps you are imagining that the resonator only lets
the antenna absorb a bit more of the energy that passes
within one antenna-length distance. If that's all that
it did, I wouldn't be the least bit excited, and those
physics papers would never have been written. The resonator
lets the antenna absorb energy which can miss it by
thousands of antenna-lengths (in the case when the
physical antenna is thousands of times smaller than
1/4 wavelength.)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1893. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8acopoohc1@nnrp1.deja.com>
Source record: 62599
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <UV9y4.16896$84.527660@elnws01>,
"Scott Stephens" <Scott2@Mediaone.net> wrote:

> > then if this whole process
> > could be performed by a single object (being director
> > and receiver simultaneously), then we'd have an
> > "energy sucking" device.
>
> True. What single device can simultaneously generate a complementary
field
> to an incident wave and absorb it too? It must occur with highly
reactive
> elements in a near-field, because it will radiate power (by
definition) in
> the far field.

Yep. It only works for short antennas. And how can it
simultaneously absorb and generate a complementary field?
Not be being reactive per se, but by having a memory.
By storing energy from previous cycles, then using that
energy to drive an oscillator connected to the same
antenna, which absorbs MORE energy for future cycles.
Which is what a tuned circuit does naturally. It can only
work if the phase of the incoming signal is not varying
all over the place. Which is the same as saying that
it works best for single-frequency waves and high-Q
resonators.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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1894. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8acpfbouj1@nnrp1.deja.com>
Source record: 62600
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38C4293B.C55957B4@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:
> A short dipole presents a mainly capacitive (plus some
> resistance) impedance to its load. So in case 1,
> I get to optimize only the source resistance, and
> in case 2 I get to optimize the source resistance
> and throw in a parallel R and C?
>
> It look like a no brainer. Case 2. If the
> source is capacitive, let the load be inductive.
>
> I'd look at it from a load matching point of view.

Thats what it SEEMS like, until you find out that the
antenna is absorbing energy which would otherwise pass
by at a large distance. "Load matching" implies that
we're letting the antenna grab energy which was already
there. The suprise: "already there" includes
the whole nearfield, and if frequency is low and the
nearfield region is huge, then the antenna acts like
it is "reaching out" across a non-trivial area.
Call it "load matching" to hide the details, or "energy
sucking" if you like controversy! :)

>
> It might be easier to understand with a series L
> rather than a shunt L. I think this is the same
> concept as base loading the antenna.

Could be. Is a base-loaded antenna only effective over
a certain frequency range? I thought that base-loading
was some sort of impedance matching, but if it forms
a low-Q resonator, then it might be analogous to putting
a capacitor across the loopstick in an AM receiver. For
longwave using electrically short whips, it's gotta be
a good thing.

--
((((((((((((((((((((((O)))))))))))))))))))))
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1895. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8acrfb$q39$1@nnrp1.deja.com>
Source record: 62601
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38C67BF4.AF95D45F@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:
> > antenna's effective size, as Sutton and Spaniol did in
> > their active ELF antenna (papers referenced at the end
> > of http://www.amasci.com/tesla/tesceive.html)
>
> I haven't read the paper, but I suspect that they put
> more power into it than they pulled out of the incoming
> wave.

Yep. Active drive can't grab any more energy than a
passive resonator, and it dissipates energy in the
load resistance. It just allowed them to make the
"energy-enhancement effect" be broadband, since they
weren't relying on a resonator to supply the "drive field."
In the frequencies they were messing with, it let them see
fast-changing signals which otherwise could only be
detected with long integration times, which normally
blocks observations of fast-changing signals.

> > > My objection is one of emphasis. The way you have told it,
> > > it sounds to me like you consider the source fields and the
> > > antenna field to be two separate fields.
> >
> > But they are,
>
> As I let the water out of my bath tub, I notice that there
> there is a depression in the water level over the drain.
> The
> depression is really there and it is interesting and
> deserves

I wonder if "energy sucking" applies to acoustics? If I
connect a resonant chamber to an orfice where the orfice
diameter is far smaller than the wavelength, will extra
energy pass through that orfice?

> some study, but I don't tend to think of that depression as
> sucking water out of the tub and shoving it down the drain.

Say I have one electron. It is surrounded by a
radial e-field. A distant proton is surrounded by a
similar field. Hold them close, and the "two fields"
superpose to create "one field" with a dipole pattern.
The radial fields have apparently vanished into the

dipole field. However, if I move the electron around
without moving the proton, the result will be as if I
had moved the electron's underlying e-field, as if the
"two fields" were still there inside the "one field."
OR I could imagine that the charge on the moved
electron had merely distorted the "one field." Which
viewpoint is right?

Does the current in the antenna simply distort the one
EM field? Or does the independant field generated by
the antenna-current superpose with the UN-distorted
EM waves in such a way as to deflect their trajectory?
Either the charges cause the EM waves to deflect inwards,
or the "antenna's local field" does the job. It's
two ways of looking at the same situation.

In years of arguing with people, I find a spectrum of
philosophies with two opposite ends: on one end are
people who know the world is REAL, and therefore there
must be ONE explanation for a phenomenon. Any other
explanations are therefore distortions, or perhaps
blasphemy, but in any case it must be stamped out or
at least prevented from contaminating the One True
Explanation. At the other end of the spectrum are people
like Feynman, who realize that we can only see the world
through our mental models, but never perceive it directly.
There is not one "right answer", there are a variety.
The more mental models one has in the "toolkit", the
better one understands reality.

> To me, your description of energy sucking sounds backward
> in a similar sense.
>
> But, consider this (I think you will like it).
>
> If I wind a coil on a torroidal form and energize it
> sinusoidal, and if I do an idea job, there is no
> H or B field outside of the torroid. There is E, but no
> H or B. I then run a wire down the middle and
> connect the ends to a resister. I have made a
> transformer. The resister absords power. But how can
> the Poynting vector be non zero it there is no H or
> B from the primary current? Easy, it comes from the
> secondary current. So here is a case where the E
> component of the field is attributed to source
> currents and the H component is attributed to the
> load current. And it works fine.

Yes. My version from long ago: drive your
electrically-small toroid with RF, but it cannot
radiate since it's too small and it lacks an external

b-field. Now thread the toroid with a straight rod
which is 1/2-wavelength long. The metal rod has "let
out radio waves!" They were blocked by the lack of a
b-field. If we were dealing with megawatts of UHF
with superconducting coils, it could be dangerous to
poke a metal rod into an apparantly-intert tiny ring.
Suddenly your corneas would fry and your fillings would
melt.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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1896. Re: 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: richardh@iinet.net.au
Message-ID: <38ca1550.3512844@news.m.iinet.net.au>
Source record: 62602

On Fri, 10 Mar 2000 11:45:51 +0000, phil
<phil@invest.fsbusiness.co.uk> wrote:

>I wonder if anyone can point me to any Internet sites describing a top
>band solid state pll AM tx.
>
>I have several pll designs but unsure of which type of modulator to go
>for.
>
>I'd like to keep things as simple as possible and try and find a way
>around the need for any modulation transformers.
>
>Any help appreciated.
>
>(((73)))
>
>Phil G4ZOW
Gday Phil

A free running VFO should be stable enough for AM. Alternatively use a
1834 KHz crystal - these were used in XT computers for ?video card

If you want a high level mdulator you could use a switch mode FET as
the power amp (class D efficiency should be up around 90%) and a
switch mode power supply with the audio varying the duty cycle of the
PSU (pulse width modullation). You obviously need a filter after this
to get rid of the switch mode subcarrier (say around 100KHz)

Another possible scheme I have seen uses logic inverters as an
oscillator with a cystal. Following the oscillator is an RC integrator
circuit which converts a square wave from the oscillator to a
triangle wave which is then DC summed with the audio signal. This
combination is applied to another logic inverter - the effect is again
to produce a PWM signal. Again this can be amplified in a class D
system, though I am not sure of the spectral purity.

If you wanted to get really fancy you could use the new DDS chip from
Analog Devices (AD9853) which can be amplitude modulated with a
digital signal though this would be quite involved.

I would be interested to know if anyone has actually done any of this

Richard
http://www.iinet.net.au/~richardh/VK6BRO.htm

zaprichardh@iinet.net.au
(remove the zap)

1897. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <38C3477D.360E@nbnet.nb.ca>
Source record: 62603

The Regular ignition wire for a long time has been what would be unuseable to this person.....I know what you fellows mean, and further add that he'll have to seek out copper core (not Steel either) ignition wire for his purpose. Another type of wiring might be to use HV test lead wire (obviously have to see if the gauge to handle the current is available)...Belden would be one maker (might have to buy a small roll however).

73 all - Gord VE1AJF

1898. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <lSpy4.16975$84.538602@elnws01>
Source record: 62604
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote in message <8acrfb$q39$1@nnrp1.deja.com>...
>In article <38C67BF4.AF95D45F@mmm.com>,
> rbmccammon@mmm.com (Roy McCammon) wrote:

> I wonder if "energy sucking" applies to acoustics? If I
> connect a resonant chamber to an orfice where the orfice
> diameter is far smaller than the wavelength, will extra
> energy pass through that orfice?

If you literaly suck with a Hoover, sound will be refracted into the orifice
:-)
You can put disk resonators in an array to form an acoustic antenna (looks
like a lens), but its not too efficient
Reflectors work better.

> Say I have one electron. It is surrounded by a
> radial e-field. A distant proton is surrounded by a
> similar field. Hold them close, and the "two fields"
> superpose to create "one field" with a dipole pattern.
> The radial fields have apparently vanished into the
> dipole field. However, if I move the electron around
> without moving the proton, the result will be as if I
> had moved the electron's underlying e-field, as if the
> "two fields" were still there inside the "one field."
> *OR* I could imagine that the charge on the moved
> electron had merely distorted the "one field." Which
> viewpoint is right?

I prefer to condsider the space occupied by the particles is capable of
being polarized, or polarizing virtual transient electron/positron pairs, or
affecting potentials, or whatever, due to the character of the particle
occupying the space.

> Does the current in the antenna simply distort the one
> EM field?
> Or does the independant field generated by
> the antenna-current superpose with the UN-distorted
> EM waves in such a way as to deflect their trajectory?

I'll reiterate again, An incident wave's field induces currents and voltages
in the antenna, which (antenna resistive loss notwithstanding) the antenna
then re-radiates. If the antenna isn't resonant, there will be a phase
shift, which can be called reactance, that will then bend or refract the
waves. Any old additional signal on the antenna will just superposition. The
wave in question is bent, because it is synchronized with itself.

One mental hangup I, and others I've seen have had, is thinking of space as a place where seperate, individual waves are traveling in all different directions. Space can be thought of as a crystal lattice, where the elements of the crystal at any instant are the sum of the myriad of waves. Actualy space is like a boiling foam, at a small enough level.

> In years of arguing with people, I find a spectrum of
> philosophies with two opposite ends: on one end are
> people who know the world is REAL, and therefore there
> must be ONE explanation for a phenomenon. Any other
> explanations are therefore distortions, or perhaps
> blasphemy, but in any case it must be stamped out or
> at least prevented from contaminating the One True
> Explanation.

Have a look at this :-) http://www.navi.net/~rsc/physics/wallace/farce.txt

> At the other end of the spectrum are people
> like Feynman, who realize that we can only see the world
> through our mental models, but never perceive it directly.
> There is not one "right answer", there are a variety.
> The more mental models one has in the "toolkit", the
> better one understands reality.

And when our mental models are schizophrenic double speak about particle-wave collapse double-speak, how can we have the congnitive tools to think clearly?

A quote from a very good (partial) online textbook at http://www.dse.nl/motionmountain/C-5-QEDB.pdf (page 18)

"In summary, there is no irrationality in quantum theory. Whoever uses quantum theory
as argument for irrational behaviour, for ideologies, or for superstitions is guilty of disinfor-mation.
A famous example is the following quote.

"Nobody understands quantum mechanics.
Richard Feynman"

1899. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <sSpy4.16976$84.537828@elnws01>
Source record: 62605
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...
> >And try this ftp for some exchages about that B(3) stuff. I'll have to
read
> >up and see what its about.
> >http://www.navi.net/~rsc/physics/B3/evans/
> >
>
> Don't bother. From what I can tell, it's about being mistaken.
>
I quickly scanned the 462sumry.zip file (PDF) and it made a little since.
Wish I could understand it better. Where's the mistakes?

Scott

1900. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <wSpy4.16977$84.538645@elnws01>
Source record: 62606
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Richard Herring wrote in message <8aavdc$9is$1@miranda.gmrc.gecm.com>...
>In article <bergervo.952619883@rook>, Bergervoet J.R.M.
(bergervo@natlab.research.philips.com) wrote:
>> In sci.physics.electromag, Richard Herring writes:
>> >
>> >Photon-photon interactions are a second-order effect in QED.
>> >
>> In QED this is called a 4th order effect. Photon-photon
>> interaction requires a fermion loop with 4 photons attached,
>> hence 4 vertices and the 4th power of the coupling constant, e.
>
>I stand corrected. The point's the same, though. It's not significant
>under the conditions discussed here.

What? 4th order? fermion loop with 4 photons???

1901. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ad9tg$13e$1@plutonium.btinternet.com>
Source record: 62607

Dear Tom, a pretty smile is all that's needed to soften the heart of
any hard-pressed electric motor repairer.

Reg

1902. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <38C348B6.85F@nbnet.nb.ca>
Source record: 62608

Just as a further note....the least amount of insulation available for automotive wiring would be ok for lots of applications as it (older and maybe more likely available copper core) only had to contain systems producting up to 20Kv or so. The 8mm stuff is used both to insulate systems running up to 50Kv AND against extreme heat in todays cramped compartments or in high performance engines. Good ideas though!

73 - Gord

1903. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ckfcq.63v.root@radioactivex.lebesque-al.net>
Source record: 62609
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8ch49a.bo.root@radioactivex.lebesque-al.net>,
>
>
> Uh. Are you imagining that the effective area of an antenna
> is the physical cross-section of the wire, viewed broadside?

If P watts are radiated into 4-pi and you cover all 4-pi with n antennas, then what is the average power absorbed by each if all n antennas are equivalent, 100% efficient and lie a distance r from a source which radiates isotropically? If you have an answer different from P/n, stop reading and subscribe Astrology Today, since you've violated conservation of energy. Now assume they are 10% efficient rather than 100%, but all of them have a 10% efficiency and nothing else is different. If you didn't get 0.1 P/n for each, you'll have to come up with some excuse to arrive at an asymmetric answer to a completely symmetric problem. I'll get to the case of identical gaps in a moment, but first, nobody seems to have a problem with this concept when applied to gamma rays and scintillators, why should it differ for an antenna? photons are photons. Just because certain phenomena produce high energy photons (like the peaks in 60Co) and some produce lower energy photons (like a radio), why should there be a difference in the way they behave other than using a detector that takes advantage of phenomena of the appropriate energy scale? (you wont see any scintillation in a NaI(Tl) crystal from channel 4, for example).

> I mean, do you imagine that RF photons come flying in on
> straight trajectories, and if they miss the wire by a tiny
> bit, they go right on by? That's what you seem to be saying

Go draw a probability distribution about some point P(r,\theta, \phi) in space for a photon emitted in the interval of ime t + \delta t from a source at the origin (or the equivalent -- calculating the probability distribution for it being anywhere else) Now trace the center of the probability distribution over the length (or surface area if you don't have approximately a line of some sort for an antenna). Now figure in the phase space factor (the probability of absorption vs some other process, like elastic scattering, inelastic scattering, multiple scattering, etc., due to kinematics). By the way, this same excercise tells can be used to descibe skin depth. The attenuation is nothing more than what you get when considering the penetration of a potential step by a particle wit wavefunction \psi. It just may not be easy to come up with a height, V_o, for the step from first principles.

>
> If I double the diameter of the wire in a conventional
> 1/2-wave dipole, would you predict that the received
> power must double? That's what your "golfcourse hole"
> analogy implies.
>

Do you really want me to finish this? I can, but I imagine it's
getting tedious to read as well as try to find the clearest way
to get the point across. However, I will if there is any point
to doing so and I'm not just wasting my time by providing an
infinite number of possibilities to digress and avoid just having
to deal giving up on the "energy sucking" tack. I'm not about
to deal with an endless series of irrelavent tangents.

As a starting point, you might consider thinking of the antenna
as a large collection of point-like receptors of a phased array
that add up at the point the signal is injected or detected with
the relative phases determined by the distance from that point
and the frequency of the carrier. You'll see that it's not as
obvious that twice as physically large corresponds to twice the
collection efficiency since you are also constrained in time by
the requirement that later signals arriving nearer the collection
point cant overlap earlier ones from further away.

>> This is hardly a novel concept. Any antenna has some reactance
>> associated with it.
>
> Then why are physicists writing papers about it? The whole

Don't say physicists. Say: A. Uthor, Journal of Stuff,
No. N pp# (yyyy)

I cant comment on what is even being claimed without seeing the paper
for the simple reason that if I think you've misinterpereted some
genuine scientific research, I'm not any more likely to think it backs
up your claim. On general principles, (which, if need explaining, means
don't bother to do so) and just the basic waste of time, be sensible
about A. Uthor and Jounral of Stuff. I consider Astrology and the usual
keelynet fare to be equally wasteful examples of points which the
divergence of information is always negative -- no matter what
information goes in all that emerges is the ascii version of blackbody
radiation. Someday, a credible theory of something may ooze out, but
that day isnt today.

>
> "How can a particle absorb more than the radiation
> incident upon it?" If the particle is like a hole in
> a golf course, then how can it grab any more than the
> photons which actually hit the "hole"? But they do! I
> think you don't understand the reason for those papers.

Before you ask me to finish the above, do you understand the concept of probability distributions as opposed to a deterministic case? Do you understand why quantum mechanics allows tunneling through a barrier while classically tunneling cant occur? If not, this wont make sense either.

> It's to explain known experimental results.
>

As I said before, with an infinite number of parameters to cover every phenomenon, the "I have a new theory of everything" or the "Let me speculate without considering the implications" , approach anyone can explain the universe and by increasing the jargon can bullshit people lacking a big enough shovel. Providing the minimal description of nature in a consistent way is the hard part.

> Do you have an explanation for how a tiny metal particle
> can intercept EM radiation which is a large number of
> particle-diameters away from its surface? The phenomenon

It doesnt. It's your notion of "a distance away" that's the problem. Photons are not classical objects. You cant treat them that way. You can only treat their probability density that way.

> Perhaps you are imagining that the resonator only lets
> the antenna absorb a bit more of the energy that passes
> within one antenna-length distance. If that's all that
> it did, I wouldn't be the least bit excited, and those

Then dont. Fix your conception of electrically small. Hard to calculate doesnt mean "new theory required" or hard to understand conceptually.

> physics papers would never have been written. The resonator
> lets the antenna absorb energy which can miss it by
> thousands of antenna-lengths (in the case when the
> physical antenna is thousands of times smaller than
> 1/4 wavelength.)

I'd be willing to bet that your notion of electrically small is incorrect. Look at an archimedean spiral. How big should an antenna be from consideration of the unccertaint principle? In that case, is a straight line required? What changes if you consider 2 dimensional areas or 3 dimensional volumes? Would a 3-d volume of metal be an improvement over a hollow cube (it's bigger; has more metal). The last example just shows even a simple-minded picture cant be applied ind-iscriminately. So far, either you have tried to do exactly that with whatever I've provided or you really just cant tear loose of the classical picture.

1904. Cheap Telephone headsets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: ve2vfd@rEmOvE.sympatico.tHiS.ca
Message-ID: <38ca3f8c.2846299@news1.qc.sympatico.ca>
Source record: 62610

With the mass quantities of cheapo cordless phone headsets out there
(which all seem to use a standard stereo headphone plug), has anyone
come out with a way to adapt them for use with a normal HT?

They have nice models and the price if definetly right

Comments?

Pat

. \/ Advisor Pat - Patrick De Gagne - Montreal, Canada
. /\ D.D.O. Rovers & Venturers - Aikido - Roxboro Fire Dept
. / \ http://www3.sympatico.ca/ve2vfd - I-Spy on Scoutlink
./ \ PDG @ CAM.ORG - VE2VFD - I used to be a Flying Frog!

1905. Re: help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <952775501.454450036@news.indigo.ie>
Source record: 62611

mark pullen <mpullen@melbpc.org.au> wrote:
>I am having trouble understanding the schematic representation of a
>trifiliar winding eg,knowing which dot is the beginning of the winding,

See: http://www.qsl.net/ei9gq/diodemix.GIF

and http://www.qsl.net/ei9gq/trifilar.JPG

>,anyway I always end up in a mess and totally pissed off having
>wasted hours of time with little or no result.

This is not really a problem. It is quite normal to be "Pissed Off"
when a circuit refuses to work properly. Bounce the offending circuit
off the wall, try again later when you calm down.

>my last
>effort has left me pretty fed up to the point of giving up so i hope
>someone can help.
> regards
> mark.

Ugly (Dead Bug) construction is a quick and easy way to
produce a working circuit. As a general rule, the uglier
it is, the better it will work. If it doesn't work first time,
you don't have to etch a new PCB to modify the
circuit.

http://www.qsl.net/ei9gq/ugly.JPG

Happy Homebrewing.

Ed. EI9GQ.

--

Remove 'X' to reply.

1906. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8adjbt$nd0$1@news.IAEhv.nl>
Source record: 62612
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag Scott Stephens <Scott2@Mediaone.net> wrote:

> Richard Herring wrote in message <8aavdc$9is$1@miranda.gmrc.gecm.com>...
>>
>>I stand corrected. The point's the same, though. It's not significant
>>under the conditions discussed here.
>
> What? 4th order? fermion loop with 4 photons???

Yes. Not significant, as Richard said.

-- Jos

1907. Heath HW-5400

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: jphelan501@aol.com
Message-ID: <20000311085937.02194.00000824@ng-ft1.aol.com>
Source record: 62613

Hello to all.

Does anyone still operate an HW-5400? Does anyone know of any good hints/kinks/mods pages out there for this rig? I have one that is receiving ok, but has transmitter trouble on SSB modes. The ALC circuit doesn't seem to be working properly (panel meter not working properly also in transmit), and the output spectrum has some spurious problems. The output can be driven to the full 100W level in both SSB and CW modes.

Thanks in advance.
de John N3DRA

Please reply to this group, or to n3dra@nospamaol.com

1908. Re: Cheap Telephone headsets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8admtdbnt1@nnrp1.deja.com>
Source record: 62614

In article <38ca3f8c.2846299@news1.qc.sympatico.ca>,
ve2vfd@rEmOvE.sympatico.tHiS.ca (Patrick De Gagne) wrote:
> With the mass quantities of cheapo cordless phone headsets out there
> (which all seem to use a standard stereo headphone plug), has anyone
> come out with a way to adapt them for use with a normal HT?
>
> They have nice models and the price if definetly right
>
> Comments?
>
> Pat
>
> ---
> . \/ Advisor Pat - Patrick De Gagne - Montreal, Canada
> . /\ D.D.O. Rovers & Venturers - Aikido - Roxboro Fire Dept
> . / \ http://www3.sympatico.ca/ve2vfd - I-Spy on Scoutlink
> ./ \ PDG @ CAM.ORG - VE2VFD - I used to be a Flying Frog!
>

-- Make an adaptor, the sleve is commom/ground, the ring is the
reciever, and the tip is the mike.

dr.d
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1909. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8adnoi$c6e$1@nnrp1.deja.com>
Source record: 62615

In article <38c980a9.192390358@news.online.no>,
LA8AK@Online.NO wrote:
> On Fri, 10 Mar 2000 01:09:31 GMT, dr.dongle@juno.com wrote:
>
> >>
> >> One suggestion is to use NE614 as a multimode detector for AM SSB
FM
> >>
>
> > Multi mode with the 612? can you point me to a URL for the
particulars?
> >dr.d
>
> no, 614 or 604 - see G8IBR's circuit mentioned in text below.
> or you can of course use MC1351, MC1357, TBA120/SN76660N or other
>
> see NE614 data, FM application is shown in Fig 4, AM detector is shown
> in fig.7
> The simplest application of using NE604/614 as multimode detector is
> to use the first IF amplifier (pin 16 to 14) for all modes, after the
> filter use a switch (1) connector filter output to pin 12 (FM/AM), and
> (2) to to break connection between filter and pin 12 for SSB and
> connect BFO signal to pin 12 (suppose 50mV is works).
> Another line goes between filter output to another switch - pt.A
>
> this switch selects between 'A' connected to pin 8 (fig.7) for SSB/AM,
> or quadrature filter (including 10pf from pin 9) connected to pin 8
> (product detector)
>
> RSSI function is lossed for SSB since the limiting IF amplifier has
> constant signal from beatosc.
>
> Scanned and sent you the G8IBR circuit from Radcom 12/76, this uses
> MC1351P as multimode detector on 455kHz. Understanding this circuit it
> is quite easy to decide how to connect NE614. I've made a sketch how I
> would connect NE614, but the problem is to decide which switch
> elements will works with satisfactory cross-talk, so perhaps easier to
> use 455kHz or lower IF.
>
> I used TBA120/SN76660N in AM/SSB demodulator, also use MC1351 as AM
> syncronous detector in a BC receiver to avoid problems with selective
> fading and improve sensitivity (S/N on low signal strength). TBA120 is
> very much like SL624 (SL1624?) multimode detector, but somewhat
> unlinear product detector. It was found useful for several other

> applications for 1kHz to 15MHz, the limiting amplifier may also work
> as oscillator, wien-bridge oscillator for the lowest frequencies and
> xtal (or ceramic element) oscillator for the higher
>
> Jan-Martin
> LA8AK
>
> PS. I refer to some printed Philips Components Data handbooks, suppose
> the info and figures applies to the data found on the web.
>
Thank you, I recieved the e-mail/w schematic. Is there a URL or a
magazine artical with this recieve info?
your help is greatly appricated.
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1910. Re: help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8admq1$2gu$1@uranium.btinternet.com>
Source record: 62616

TRI-FILAR WINDINGS

Wind three different coloured pvc or poly-insulated wires, alongside
each other, round the core. Secure and bare the ends. Then connect
all three wires in series. The colours will help you to think clearly
about what you are doing.

Reg, G4FGQ

1911. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <ybvy4.896$QF6.51992@news5.giganews.com>
Source record: 62617

Yes adding sleeving over the wire will increase its voltage rating. The details are another story; you'd do well to make some tests with a hipot if you have one available.

73, Bob K6DDX

1912. Trade?: (1)Micor, (2)Motrac, (1)Pullsar for....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38ca7ccb.3523590@news.thegrid.net>
Source record: 62618
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.homebrew,rec.radio.swap

Looking to trade:
1 Motorola Micor Tested Working W/ Control Head (Freuency Counter showed 800 mhz.)
1 Motorola Pulsar Tested Working W/ Control Head (Frequency Counter showed 150 mhz.)
2 Motorola Motracs Unknown Frequency Untested No Control Head

I was going to convert the 2 first ones for repeater use, but didnt want to attempt it in
case I blow them up. So I will trade all 4 radios for a working Converted for Repeater use
GE Master II or
Motorola Micor on either 2 meters or 220mhz amateur bands ready to use, Controller
Ready....

The Micor and Pulsar look in good shape and are working. The Motracs are ugly and
untested because there is no control heads.

Here is the info for the radios:

Motorola Micor:
FCC XMTR DATA: CC5010
FCC RCVR DATA: RC0071
MODEL #: T45RTA6B00AA
SERIAL #: 439CDS1200

Motorola Pulsar
MODEL: T1776A
RCVR: RC0047
FCC TYPE: CC3225
SERIAL: RR6210

Motorola Motrac #1:
MODEL: U43HHT-11300
TRANS TYPE: CC3009
SERIAL#: E-14787

Motorola Motrac #2:
MODEL: T43MHT-1190C
TRANS TYPE: CC3059
CABLE TYPE: 2
SERIAL#: Not Visible

I would prefer a local trade (Redding, CA.) but will ship in the US.
If interested or have a
question, Reply to cobra@no-spambudweiser.com
Be sure to remove "no-spam" from my e-mail address to reply. Thanx

73,
kf6foz

The KF6FOZ BBS
Redding, CA.
530-229-0896

Visit my Website for other stuff and more info on
the BBS. Even a good list of Sale and Swap sites
on there.
http://www.qsl.net/kf6foz/main.htm

1913. Re: Data for 2N4427 & 2N3866 @ 300MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8ae5stljm1@nnrp1.deja.com>
Source record: 62619

In article <000b01bf8ab6$5a2f6640$0e1548a6@internet>,
"Horta" <nabaut@attgloblal.net> wrote:
> Hi I�m looking for 2N4427 and 2N3866 data @ 300MHz, perhaps
2N4427
> will not work that high but if you have any data, I�ll be glad to
know.
> Thanks in advance!
>
> 73 's de PY2NI - Horta
> GG66RK
>
>

Ol� Horta...

As datasheets deles eu tenho aqui com as curvas para vc ver a opera��o
na frequ�ncia desejada. Tentei scanear mas n�o fica leg�vel.
Realmente o 2N4427 dar� 1W de saida em 175 Mhz com 100 mW de input e
ganho de 10 dB garantido, mas em 300 Mhz s� poder� dar (no limite m�ximo
e n�o recomendado) 700 mW com excita��o de 100 mW, ou seja um ganho de
apenas 8,4 dB.
O 2N3866 � que trabalha com at� 28 V de fonte. Para 13.8 V de fonte, ele
d� (tamb�m no limite) 1 W com 100 mW de excita��o e ganho de 10 dB. Em
300 MHz ele d� uns 300 mW com a mesma excita��o. Ele opera melhor com 28
V, com mais ganho e mais pot�ncia de saida. Tudo isso em classe C.
O maior problema � que o 2N3866 pode dissipar a 25 C at� 5 W e o 2N4427
apenas 1 W.
--
Abra�os,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

1914. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38ca82b3.258458925@news.online.no>
Source record: 62620

On Sat, 11 Mar 2000 15:12:19 GMT, dr.dongle@juno.com wrote:

>>
> Thank you, I recieved the e-mail/w schematic. Is there a URL or a
>magazine artical with this recieve info?
> your help is greatly appricated.
> dr.d
>--
> Stop the madness vote Libertarian!
>All it takes for EVIl to triumph is for good people to do nothing!
>-Edmond Burke-
> Chris Snyder, Cosby, Tn. KD4 OGD

just Radio Communication, RSGB, Decembre 1976, Januar 1977
N. Davies G8IBR "A receiver for 144MHz"
RSGB books has the URL, but not sure if this is covered in any books
https://secure.ws4.u-net.com/www.rsgb.org.uk/books/orderfrm.htm
You may order Technical topics scrapbook by G3VA covering different
periods, the oldes books by G3VA covering 'technical topics' are
"Amateur radio technique"

73
Jan-Martin
LA8AK
RSGB member since 1974

1915. Re: NE602

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38CAA52C.18C14EB2@clifto.com>
Source record: 62621
Cross-posted to: rec.ham-radio,rec.radio.amateur.homebrew

Mark Zenier wrote:
> Clifton T. Sharp Jr. <clifto@clifto.com> wrote:
> >Mark Zenier wrote:
> >> Yes it it. Signetics has been owed by Philips since the early 1970's.
> >
> >Apparently not: <http://www.signetics.com/doc/history.html>
>
> Are you quibbling about the use of the name by Signetics Korea, a spun
> off company that operates as a subcontrator for packaging and testing ICs,
> or that 1975 is to be considered mid rather than "early 1970's"?

The web site gave me the impression that Philips sold Signetics to Keo Pyung
Group.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

1916. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <=bvKOFgE21xD4pF4WB0dnkx8ptMB@4ax.com>
Source record: 62622
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Mon, 06 Mar 2000 19:42:09 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
> Yes, that's the key question: does connecting a tank
> circuit to a short dipole (or small loop) cause it to
> absorb MORE energy from the incoming waves?

And the key answer is NO. Resonance has nothing
to do with the amount of energy intercepted by the
antenna.

>More
> specifically, if we connect just a resistive load to
> a short dipole and adjust that resistor for maximum
> received power, can we receive even MORE power if we
> then connect a lossless tank circuit across that dipole,
> then re-adjust that resistor value for maximum power?
> These papers imply that the answer is yes:

My answer is also yes, but not because the antenna
intercepts more power. It is because the circuit is made
non-reactive by being resonated, allowing more power
to flow into the load instead of being re-radiated. In other
words, it is a circuit matching issue.

P = E * I * cos(theta)

When theta is 0, power out of the circuit is maximized.
Theta is only 0 when the circuit is non-reactive, and we
can make it non-reactive by resonating it.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1917. Re: Cheap Telephone headsets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Dave Hutchinson <dhutch@cpomail.net>
Message-ID: <38CAD99C.5D5348D6@cpomail.net>
Source record: 62623

I did just that for a pair of FRS Kenwood handhelds I use while hunting. Find a schematic for the speaker mike that works for the HT in question, and rewire the headset/boom mike to match the "pinout" of the speakermike. It helps if you know mic impedance beforehand, so you can shop around for a headset that has the right microphone characteristics. Easily done. At worst, you might have to add a small capacitor or resistor inline.

73 de N5XL

Patrick De Gagne wrote:

> With the mass quantities of cheapo cordless phone headsets out there
> (which all seem to use a standard stereo headphone plug), has anyone
> come out with a way to adapt them for use with a normal HT?
>
> They have nice models and the price if definetly right
>
> Comments?
>
> Pat
>
> ---
> . \/ Advisor Pat - Patrick De Gagne - Montreal, Canada
> . /\ D.D.O. Rovers & Venturers - Aikido - Roxboro Fire Dept
> . / \ http://www3.sympatico.ca/ve2vfd - I-Spy on Scoutlink
> ./ \ PDG @ CAM.ORG - VE2VFD - I used to be a Flying Frog!

1918. Electric Radio Magazines 1995 on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Mike14@west.net
Message-ID: <1mzy4.385$Xt1.8699@newsfeed.avtel.net>
Source record: 62624

The complete year of Electric Radio Magazines 1995 - ER Magazine is the premier magazine of amateur radio vintage equipment - descriptions, modifications and history of vintage ham radio and much much more
See it on the new radio & electronics auction Electron Bay at:
http://www.electronbay.com/lot.cfm?lotID=107

1919. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38caa04e.266038873@news.online.no>
Source record: 62625

On Sat, 11 Mar 2000 15:12:19 GMT, dr.dongle@juno.com wrote:

>>
> Thank you, I recieved the e-mail/w schematic. Is there a URL or a
>magazine artical with this recieve info?
> your help is greatly appricated.
> dr.d
>--
> Stop the madness vote Libertarian!
>All it takes for EVIl to triumph is for good people to do nothing!
>-Edmond Burke-
> Chris Snyder, Cosby, Tn. KD4 OGD

just Radio Communication, RSGB, Decembre 1976, Januar 1977
N. Davies G8IBR "A receiver for 144MHz"
RSGB books has the URL, but not sure if this theme is covered in any
books
https://secure.ws4.u-net.com/www.rsgb.org.uk/books/orderfrm.htm
You may order Technical topics scrapbook by G3VA covering different
periods, the oldes books by G3VA covering 'technical topics' are
"Amateur radio technique"

Had a second thought about the application for NE614, it seems fairly
easy to use. Nominal input to product detector for AM and SSB/CW is in
the region of 5 to 20mV RMS with MC1351 and TBA120. Not sure if it is
practical to combine the demodulator for all three modes, the price
for a second NE614 isn't too high, and you loose RSSI function for the
device used for ssb, this is the second argument for using a different
device for FM - and it might serve as S-meter driver for all modes

if somebody is interested, the file showing the G8IBR type MC1351P
multimode detector is 8kb gif, send me a mail (it is easier since I
use MS Outlook express for mails and free agent for newsgroups)

73
Jan-Martin
LA8AK
RSGB member since 1974

1920. 4 pins IC-706 connector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: F5IYJ <f5iyj@qsl.net>
Message-ID: <38CACC3C.3D7E683F@qsl.net>
Source record: 62626

How can give me some details about the 4 pins connector of the Icom
IC-706 ?
I think one is ground, other is +Vcc and the others ?

Thank you for your answer.

73 de Phil- F5IYJ.

1921. Drake MC-4 Speaker/Pwr Meter on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Mike14@west.net
Message-ID: <E9Ay4.405$Xt1.9004@newsfeed.avtel.net>
Source record: 62627

This is a rare Drake item...I have never seen it posted for sale or auction.
see it on the New all radio and electronics auction Electron Bay:
http://www.electronbay.com

1922. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8aemh3th1@nnrp1.deja.com>
Source record: 62628
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <=bvKOFgE21xD4pF4WB0dnkx8ptMB@4ax.com>,
Gary Coffman <ke4zv@bellsouth.net> wrote:
> On Mon, 06 Mar 2000 19:42:09 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
> > Yes, that's the key question: does connecting a tank
> > circuit to a short dipole (or small loop) cause it to
> > absorb MORE energy from the incoming waves?
>
> And the key answer is NO. Resonance has nothing
> to do with the amount of energy intercepted by the
> antenna.

But because of resonance, the circuit stores energy from
previous cycles. That is critically important, and that's
why "impedance matching" is too limited to truely describe
what is happening. Also, if the wavelength is long, the
resonant antenna can absorb energy which would other
wise miss it by a large number of antenna-lengths. That
is part of impedance-matching too, but it is hidden because
"impedance matching" in this situation is only one
viewpoint, and it has serious limitations if expanded insight
into the physics is the goal.

>
> >More
> > specifically, if we connect just a resistive load to
> > a short dipole and adjust that resistor for maximum
> > received power, can we receive even MORE power if we
> > then connect a lossless tank circuit across that dipole,
> > then re-adjust that resistor value for maximum power?
> > These papers imply that the answer is yes:
>
> My answer is also yes, but not because the antenna
> intercepts more power. It is because the circuit is made
> non-reactive by being resonated, allowing more power
> to flow into the load instead of being re-radiated. In other
> words, it is a circuit matching issue.

I see the difficulty. You seem to be arguing that BECAUSE
it is an impedance matching issue, it IS NOT a matter of
resonance. As if there was one right answer, and we must
get rid of any other viewpoints. This is improper, in my
opinion, because in order to understand anything completely,
you have to look at it from all possible viewpoints. I realize
that I violate some particular belief when I say such a thing,

and it causes people to raise objections and become
argumentative.. If we're SUPPOSED to view it only
as circuit matching, and never in any other way, then what
say is sort of like blasphemy. It is an alternate "religious
position" which, because it is ALTERNATE, is perceived
as being incompatible. No. It is only alternate. But if you
believe that there is "one right answer", then the
existence of alternate viewpoints must be "wrong"
somehow. (And from my viewpoint, if there are several
ways to view a phenomenon, and they give differing
insights, then the focusing on "one right answer", and
the attacks on other viewpoints, THAT is the
blasphemy.)

>
> P = E * I * cos(theta)
>
> When theta is 0, power out of the circuit is maximized.

Right. Heh. AT RESONANCE, power out of the circuit is
maximized, and if the freq of the incoming wave should
change, it's no longer at resonance, so the effect doesn't
work. To make it work, sweep the frequency of the
transmitter around until resonance is achieved in the
receiver.

Johnathan Swift had things to say about big-endian versus
little-endian warfare in GULLIVER'S TRAVELS. It is
particularly appropriate in any physics debate, since often
the fight is over the One True Way to "crack" a
complicated "egg."

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1923. DSP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: "John R. Glazier" <glazier.john@mcleod.net>
Message-ID: <38CAE509.378450C9@mcleod.net>
Source record: 62629

Any direction of where I can find a schematic for a DSP filter? Thanks
for your time.
John KI0OF

--

Click here for Free Video!!
http://www.gohip.com/freevideo/

1924. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38CAF7D1.B5B54F47@mmm.com>
Source record: 62630
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> Thats what it SEEMS like, until you find out that the
> antenna is absorbing energy which would otherwise pass
> by at a large distance.

You may be holding an unwarranted assumption about
where energy is when it is in transit. There is no
classical physics requirement that the energy be in
any particular place when it is not interacting
with matter. It is conventional to say that energy
density is proportional to the square of the field
strength, but it is not necessary.

Feynman had something say about this. I'll
see if I can find the section and give you
a reference.

> "Load matching" implies that
> we're letting the antenna grab energy which was already
> there. The suprise: "already there" includes
> the whole nearfield, and if frequency is low and the
> nearfield region is huge, then the antenna acts like
> it is "reaching out" across a non-trivial area.
> Call it "load matching" to hide the details, or "energy
> sucking" if you like controversy! :)

Consider this. The distant transmitter has two antennas
which create an interference pattern. The location
in space where the pattern shows complete cancellation
has zero thickness. If a dipole was there, it would receive
no signal. But move your dipole to where the signal
is strong and let the near field build up. Now move
it to a null in the pattern before the near field
dies out. Since the true null is near zero thickness,
the near field ought to stretch beyond that and continue
to pull in energy from the field.

But it doesn't.

Opinions expressed herein are my own and may not represent those of my employer.

1925. Need Info on Encoder board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: dwarheit@nauticom.net
Message-ID: <3jvlcsccu3t8l5n0u5eiusj11utnirpcf5@4ax.com>
Source record: 62631

Does anyone know exactly how to connect up a Communication Specialists SS-32 encoder board to an old Kenwood TS-700SP 2 meter all mode radio using the existing tone switch. If you have ever done this, please contact me via email. All email will be answered.

Thanks,

Dave

http://www.hamsnet.net/KN3ZAN

1926. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38CAFBF8.EAB033BC@mmm.com>
Source record: 62632
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:

> Say I have one electron. It is surrounded by a
> radial e-field. A distant proton is surrounded by a
> similar field. Hold them close, and the "two fields"
> superpose to create "one field" with a dipole pattern.
> The radial fields have apparently vanished into the
> dipole field. However, if I move the electron around
> without moving the proton, the result will be as if I
> had moved the electron's underlying e-field, as if the
> "two fields" were still there inside the "one field."
> *OR* I could imagine that the charge on the moved
> electron had merely distorted the "one field." Which
> viewpoint is right?

The "one field" view will serve you better as you
study more advanced physics.

> In years of arguing with people, I find a spectrum of
> philosophies with two opposite ends: on one end are
> people who know the world is REAL, and therefore there
> must be ONE explanation for a phenomenon.

Measurements are real. Theories are judged on their
usefulness.

> Any other
> explanations are therefore distortions, or perhaps
> blasphemy, but in any case it must be stamped out or
> at least prevented from contaminating the One True
> Explanation.

Well, I sort of follow the teachers equivalent
of the Hippocratic oath "do no harm". Which means
I am reluctant to support "alternate" explanations
when I suspect that they will cause confusion
later in the educational process. It is my value
judgment that most people are better served by
teaching "the standard" explanation. If the
"standard" explanation has short comings, that
needs to be admitted. Alternate explanations
are ok, but need to be clearly labeled as such.

Throw in "as if" every so often.

> Yes. My version from long ago: drive your
> electrically-small toroid with RF, but it cannot
> radiate since it's too small and it lacks an external
> b-field. Now thread the toroid with a straight rod
> which is 1/2-wavelength long. The metal rod has "let
> out radio waves!"

I would say that the rod has changed the boundary
conditions.

Opinions expressed herein are my own and may not represent those of my employer.

1927. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <38CB1215.3A5A@pacbell.net>
Source record: 62633

Reg Edwards wrote:
>
> Dear Tom, a pretty smile is all that's needed to soften the heart of
> any hard-pressed electric motor repairer.
> ----
> Reg

That might be all very well where you live, Reg, but out here
on the west coast of North America, beautiful women with nice
smiles are a bit common, and occasionally, even dangerous -
to one's pocketbook if nothing else. Besides, it's sometimes
difficult to tell what kind of smile, and from whom, our
hard-pressed electric motor repairer might consider acceptable.
I've had better luck just being a hat-in-hand good-ol'-boy.
Then I don't have to turn the fellow down when he asks me for
a date.

Tom Donaly KA6RUH

1928. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1103002351350001@dialup-284.hip.cam.org>
Source record: 62634

In article <8adnoi$c6e$1@nnrp1.deja.com>, dr.dongle@juno.com wrote:

>{lots deleted]
> Thank you, I recieved the e-mail/w schematic. Is there a URL or a
> magazine artical with this recieve info?
> your help is greatly appricated.
> dr.d

This idea of Jan-Martin's doesn't originate with a particular device. The basic idea is that a double balanced mixer is used for CW/SSB, with a locally generated oscillator signal in the other input, which beats the incoming signal down to audio frequencies.

For AM, if you put the incoming signal through a limiter, you will get a locally generated constant voltage signal at the carrier frequency to use instead of a BFO; again that signal beats the incoming signal down to audio frequencies.

I saw this scheme for AM in an article about the MC1496 double balanced mixer 30 years ago; they even claimed that if signal levels were right, no external limiter was needed. And you'd see the scheme in various mult-mode detectors over the years. The National LM373 data sheet or application note showed this scheme, and there were some Plessey multi-mode detector ICs that also suggested this. And Ralph Burhans had some articles twenty years ago, in Byte and 73, on Loran C receivers that used ICs intended for AM/FM broadcast radios, which used the FM detector in this way.

A lot, though not all, FM detector IC's use a balanced mixer as part of the design. You do have to look at the specs to make sure you've scrounged the correct type. The advantage of using this is that such ICs are often handier to come by, like in scrap circuit boards, and the limiter is already there for the AM scheme. And of course, if you want to detect FM, the IC can be used for it's original purpose.

I haven't actually tried it, and I do wonder if there may be problems with strays, such as the BFO getting into the wrong area, and switching points that are physically only a few pins apart.

You could do the same thing with an MC1496 or NE602 double balanced mixer, and external circuitry. Back when the Signetic PLL's were commonly seen, one of which had an extra balanced mixer for AM detection, someone had an article using the NE561 for FM (the voltage out of the phase detector tracks the FM signal) and AM (with the extra balanced mixer mixing the incoming signal with the VCO signal locked to the incoming carrier), and then he used CMOS gates to provide

a bfo signal (for CW/SSB) and limiting for better FM reception. Of course, he was doing it all at 455KHz.

One thing about the multiple conversions in your original post. If you can get the selectivity you need, you don't need to convert to a lower frequency. Indeed, if your project isn't high performance, you might get by with not too narrow selectivity; there are plenty of CW/SSB receivers that have very little selectivity before the audio chain.

But with FM reception, you may need to convert to a lower frequency even though a higher IF provides enough selectivity. For narrow band FM, the deviation will be a small percentage of the center frequency, and if you have a high IF the recovered audio may be low. That's why you still see FM receivers that convert to 455KHz.

Michael VE2BVW

1929. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-11 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38c9838a.193128046@news.online.no>
Source record: 62694

On Fri, 10 Mar 2000 22:14:56 GMT, "William J. Erwin\(Bill\)"
<werwin@columbus.rr.com> wrote:

>I am looking for advise on adding additional insulation to std. wire that
>has an outer covering rated at 600 - 800 volts. I am building a power supply
>that has an unloaded voltage of around 3KV. Is it safe to use flexible
>plastic tubing to increase the working voltage of the existing low voltage
>outer covering?
>
>Thanks in advance,
>Bill
>
>
why not use RG213 with C-connectors when connecting external
equipment?

1930. Re: Power Supply Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: SkrewBall <ptaylor@uswest.net>
Message-ID: <38CB56FA.9BEA1D1A@uswest.net>
Source record: 62545

Perhaps,if you can't figure a way to use it you could build a voltage doubler with the large filter caps,and some good sized rectifiers,and feed that to the hi frequency switching circuit(s)..that may work.. instead of finding a 3-phase supply..

Just an idea... may not be a good one,i'm not one to judge.. it's late..

Murray Kelly wrote:

> Sounds like a normal switch mode PSU but connected to
> 230 instead of 110vac. The line volts here are 240vac
> and that is rectified to go across the 2 stacked
> capacitors. You don't state the capacity of the caps.
>
> Inside most of them is a jumper or switch so that
> the recifiers can act as a doubler for 110-120vac
> The voltage across the phases is not 120v on a house
> supply in the US. It's more like 230v
>
> At 150A the transistors must be pretty lumpish and the
> ferrite transformers, too!
>
> There have been some articles around lately about
> using PC supplies for 14v output but at a much more modest
> 20A - 40A.
>
> The ones you have sound as if they would make a great
> starting place for a shack supply.
> Hamm4fun wrote:
> >
> > I came across 4 Switching type power supplies rated at 15v 150 Amp each.
> > Trouble is the power input to them is 3 phase. The input is a three phase
> > rectifier and filter. The filter caps are a couple of big computer grade jobs
> > rated at 200VDC. Looks like this should develope about 150VDC to supply to the
> > inverter section of the power supply. I want to run this off of single phase
> > power, any suggestions on how to do this would be appreciated. I was
> > considering buiding an external 150vdc supply and connecting it to all three
> > phases.
>
> --
> ***
> * Murray Kelly vk4aok mailto://mkelly@powerup.com.au *
> * 29 Molonga Ter. / Graceville/ QLD. 4075/ Australia *
> * ph/fax Intl+ 61 7 3379 3307 *
> ***

1931. ZRS 30m QRP transceiver - ultra modern design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38caf536.287777761@news.online.no>
Source record: 62546

see http://www.zrs.org/cqzrs/299-2027.pdf for S57NAN modern QRP
transceiver using AD631 and NE612 with 4194.3kHz xtal filter in RX
The VXO is pulled 14294-14324kHz using varicaps
PCB and mounting is shown
Another unusual point (as for QEX) is that you can read back issues of
the magazine from the radio club, could it be an idea for other IARU
organisations?
http://www.zrs.org/cqzrs/

73
Jan-Martin
LA8AK

1932. Price of a Yeasu 2100B?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Gary <!turtle@owc.net>
Message-ID: <1h6ncssocce58089b89hqcgkktuolofs5i@4ax.com>
Source record: 62547

I was wondering if anyone knows the going price for a Yeasu 2100B
linear amplifier?

TNX Gary KF9CM

1933. Re: 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: phil <phil@invest.fsbusiness.co.uk>
Message-ID: <pdeUlSADB4y4Ewso@invest.fsbusiness.co.uk>
Source record: 62548

Thanks Reg and Richard for your suggestions.

In fact an engineer colleague has just finished putting together a class-E 160m PA originally designed by Fritz Raab, this together with a class-S PWM modulator.

This is more complex that I'd like for use on 160.

I'll look at your idea Reg. I do want to keep the design strictly based on the KISS principle to see how simple inexpensively it can be done with acceptable results.

I was considering the PLL route as I've found a very simple suggested building block on a web site.

Once again thanks for both your input.

Regards

Phil G4ZOW
>A free running VFO should be stable enough for AM. Alternatively use a
>1834 KHz crystal - these were used in XT computers for ?video card
>
>If you want a high level mdulator you could use a switch mode FET as
>the power amp (class D efficiency should be up around 90%) and a
>switch mode power supply with the audio varying the duty cycle of the
>PSU (pulse width modullation). You obviously need a filter after this
>to get rid of the switch mode subcarrier (say around 100KHz)
>
>Another possible scheme I have seen uses logic inverters as an
>oscillator with a cystal. Following the oscillator is an RC integrator
>circuit which converts a square wave from the oscillator to a
>triangle wave which is then DC summed with the audio signal. This
>combination is applied to another logic inverter - the effect is again
>to produce a PWM signal. Again this can be amplified in a class D
>system, though I am not sure of the spectral purity.
>
>If you wanted to get really fancy you could use the new DDS chip from
>Analog Devices (AD9853) which can be amplitude modulated with a
>digital signal though this would be quite involved.
>
>I would be interested to know if anyone has actually done any of this
>
>Richard
>http://www.iinet.net.au/~richardh/VK6BRO.htm
>

>zaprichardh@iinet.net.au
>(remove the zap)

--
phil

1934. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <O4oqULCj$GA.255@cpmsnbbsa04>
Source record: 62549
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...
>
> It's usually best if whatever approach one takes remains compatible
> with observed phenomena. Fields reaching out of the deep and grabbing
> energy (stealling joulery, perhaps?) is not consistent with anything
> that has been reported.
>
You are hereby placed on report for perhaps the SECOND worst pun I've seen
on the internet!

Mike Lucas W5CHR
Memphis, Tenn.

1935. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <38C3633A.35DC@nbnet.nb.ca>
Source record: 62550

That should have read "automotive ignition secondary wiring" ....think
then type eh!

1936. VXO for 10.100-10.130kHz TRX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38cb6f6c.319068558@news.online.no>
Source record: 62551

see http://www.zrs.org/cqzrs/299-2027.pdf for S57NAN modern QRP transceiver using AD631 and NE612 with 4194.3kHz xtal filter (two versions to choose between),
The VXO is pulled 14294-14324 using varicaps to cover 10100-10130 kHz, it uses standard 14318kHz computer xtal in colpitts oscillator

Circuit diagram, PCB and component mounting is shown
Another unusual point (as for QEX) is that you can read back issues of the magazine from the radio club, could it be an idea for other IARU organisations?
http://www.zrs.org/cqzrs/

73
Jan-Martin
LA8AK

1937. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38cb79e9.321753891@news.online.no>
Source record: 62552

On Sat, 11 Mar 2000 23:51:34 -0500, blackm00@cam.org (Michael Black)
wrote:

>
>You could do the same thing with an MC1496 or NE602 double balanced
>mixer, and external circuitry. Back when the Signetic PLL's were
>commonly seen, one of which had an extra balanced mixer for AM detection,
>someone had an article using the NE561 for FM (the voltage out of
>the phase detector tracks the FM signal) and AM (with the extra
>balanced mixer mixing the incoming signal with the VCO signal locked
>to the incoming carrier), and then he used CMOS gates to provide
>a bfo signal (for CW/SSB) and limiting for better FM reception.

Michael
Although I have some practical experiences, all the suggestions
presented are based on technical notes by G8IBR.
NE562 seems interesting device, works to above 10.7MHz, although I
don't believe it is good for NBFM, once tested monostable detector on
455kHz, but detected audio was weak. NE564 has been used in SATTV
70MHz demodulators, but deviation was 10MHz

For AM PLL demodulators is it any problem to decide the phase angle
between LO and RF signal? NE562 seems interesting in combination with
MC1496P or SO42E.

Again miss information from somebody who have tested such in
practice, so far I only know that G8IBR. LA7MI, SM6HYG, and myself has
tested this sort of AM detection. Many admits it is interesting, but
seldom seems to be capable of connecting few components

TBA120/SN76660N (SO41) was very popular device in Nederland (and
Germany) in applications for VCO, PLL-detector, mixers etc, and SO42P
has been used in Germany for several applications. Some handbooks and
sites mentions an audio upconverter I made using TBA120/SN76660N, but
I prefer using MC1496P. Have even used it in CW demodulator.
MC1310P - stereo decoder - is another device which will work for
several other applications than it was planned for, one such is audio
oscillator and mixer.

In order to be capable of using such devices you need a detailed
circuit diagram, such was shown for TBA120 in Radcom in 1973 together
with information about NBFM quadrature circuit details for 455kHz.

73
jan-martin
LA8AK (ex-G/GW5BFV)

1938. How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Willy Krogstad <willy.krogstad@levanger.mail.telia.com>
Message-ID: <iXPy4.3177$F3.185908224@news.telia.no>
Source record: 62553

Hi gang!

I would like to build my own shortwave receiver using tubes to learn more
about vacuum tubes.
Can anybody point me to web sites with schematics and info? Or are there
good books on the subject available? I am not a radio amateur, but I have
heard about (never seen) magazines like QST - I believe some of them contain
building descriptions of various receivers?

Any help to get me started.................

Willy

1939. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8agiue$np5$1@news.IAEhv.nl>
Source record: 62554
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag Mike Lucas W5CHR <lucascom@email.msn.com> wrote:
> Bilge wrote in message ...
>> ...
>> energy (stealling joulery, perhaps?) is not consistent with anything
>> ...

> You are hereby placed on report for perhaps the SECOND worst pun I've seen
> on the internet!

What was the worst? If Bilge has failed to deserve that honor, then so
be it (although it's a sad message for us at s.p.em). But then at least
we want to know by whom, and how, this defeat was caused.

Sir, I demand more information!

-- Jos

1940. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8agkkd$8u2$1@nnrp1.deja.com>
Source record: 62555

In article <blackm00-1203000006290001@dialup-284.hip.cam.org>,
blackm00@cam.org (Michael Black) wrote:
> In article <8a75in$mg6$1@nnrp1.deja.com>, dr.dongle@juno.com wrote:
>
> > I'm home brewing a 50-900 Mhz reciever similar to the one in the
> > current issue of 73 magizene. I have a nice Sony digital tuning
> > varactor tuner, in which I have disabled the control/synth chip and
> > will control tuning with a pot to the varactor ckt. The original IF
is
> > a second modual with a 1 chip combined video/IF and Sound/IF with a
4.5
> > Mhz filter between the two sections of the chip. The 41 Mhz video
carrer
> > normaly acts as a mixer oscilator input for the sound IF. There is
also
> > a 45 Mhz SAW filter (wide band) between the tuner and the IF chip.
> > I would replace the SAW filter with a nerrow band 45 Mhz filter (15
> > K), and install a FET buffer between the filter and the IF amp
> > input.
> > Next I would replace the 4.5 Mhz Ceramic filter between the
Video/IF
> > and Sound/IF with a SA 612 Mixer IC and use a mixer oscilator
frequency
> > of about +/- 44 Mhz.
> > All this (I think) should render a combination of an AM output
from
> > the video output and an FM output from the sound output.
> >
> > Now, can any one find a hole in my plan and if so what is it and
can
> > it be easly fixed?
> >
> > My other option is to use the 45 Mhz nerrow band filter, a buffer
fet,
> > a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector
> > chip and add a second 612 to convert the 10.7 to 455 Khz for AM,
with a
> > third 612 as a 445 Khz mixer for SSB.
> >
> > All constructive input appricated.
> >
>
> One thing to watch is that the front end may not be all that stable.
It

> will be running at fairly high frequencies, and is intended to be
locked
> to a reference frequency. Even in the old days, nobody worried much
> (no could they do much to improve) stability since the IF of a TV set
> is relatively wide.
>
> When you start dealing with narrow band signals, the stability of the
front
> end may be an issue. I've certainly thought about making a nice
> general purpose receiver with a TV tuner as the front end, but I don't
> think it would be stable enough to be useful (though for wide band
signals
> or IF bandwidths, it may be fine). Locking it would get around the
problem,
> but the channels are of course 6MHz apart, and the prescaler in TV
tuners
> tend to divide by so much that you can't get narrow steps.
>
> Another point is that if you scrounge up a 45MHz filter for the
> first IF, you might want to do some more scrounging and scrap the TV
> IF strip. At least some old cell phones had a 45MHz first IF, and
> scrounging one would get you the needed filter, and a whole narrow
> band IF strip. All three cell phones I've taken apart, all the clunky
> older kind that nobody wants but the parts are nice and big, had
> high first IF's and converted down to 455KHz for amplification and
> detection. The advantage is that you'd also get a crystal to make
> the converstion from the first IF to 455KHz. The disadvatange is that
> two of the three cellphones had an IF higher in frequency, somewhere
around
> 80MHz which may or may not be a problem in your project.
>
> Some of those cellphones have the IF in a nice little module,
relativley easy
> to extract from the rest of the circuitry.
>
It is interisting that you should mention cell phones, as I was going
through some on my junk and found a OKI 3 watter with a 45 Mhx to 455
IF section unfortunataly I have no data in it an it looks like it might
take several days to dope it out. I dont suppose there is any chance
you have a similar unit and already have the info?

Other than that I have droped the TV IF idea and decided on using a
MC1371 for 45 to 455 and FM detection and a TDA1572 for 455 to AM
detection with a 602/612 for SSB product detection.

dr.d

P.S.All the advice has been most helpfull.
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!

-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

1941. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38CC194E.665C4185@home.com>
Source record: 62556

Your best bet is to pick up a copy of the ARRL Handbook - one from the 1950's or 1960's - on EBay - they go for only $4 or $5. -- and all have tube receiver designs from simple to quite sophisticated. QST is available on CD Rom from www.arrl.org

Jack

Willy Krogstad wrote:

> Hi gang!
>
> I would like to build my own shortwave receiver using tubes to learn more
> about vacuum tubes.
> Can anybody point me to web sites with schematics and info? Or are there
> good books on the subject available? I am not a radio amateur, but I have
> heard about (never seen) magazines like QST - I believe some of them contain
> building descriptions of various receivers?
>
> Any help to get me started.....
>
> Willy

1942. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8agqr0bi1@plutonium.btinternet.com>
Source record: 62557

```
> Then I don't have to turn the fellow
> down when he asks me for a date.
============================
Do you mean you'd accept the invitation ? ;o)
```

1943. FS: 4 ea. 4 char 5X7 led matrix display, siemens DLR 2416

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Bob <bmiller@calweb.com>
Message-ID: <38cbff54$1_1@news3.calweb.com>
Source record: 62558

I apologise for the previous blank posting. I hope this kind of part will be useful to the home brew crowd.

Bob, KE6F

For Sale: 4 each Siemens/Infineon "Smart Display" 4 character 5X7 matrix Red LED display. Siemens/Infineon part number DLR 2416. Each unit contains an ASCII character rom, which will display numerous characters, numerals and other symbols. Data is entered in a 7 bit parallel format. Two additional pins allow for addressing each charactor position. Also has chip selects so an array of these be stacked end-to-end for larger displays. These units are packaged in wide dip packages with 0.1 inch pin spacing and 0.6 inch between the rows. A 40 pin IC socket will hold two of these display perfectly. . Full specs on the infineon web site http://www.infineon.com Units currently sell for $12. on the Pioneer-Standard web site. $13.20 for the four items post paid conus.

Thank you for the read

Bob,

1944. Re: icom computer intergace

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: "D@niel" <dsavel@easynet.fr>
Message-ID: <YmTy4.502$b3.11874@tengri.easynet.fr>
Source record: 62559

Look ARRL 1995!

73 D@niel

Ralph Mowery a crit dans le message <38C8239E.109C1580@dialpoint.net>...
>Does anyone know how th build the interface for the Icom 706 series to
>computer interface. The price of over $ 100 seems way too high for
>something just to convert to rs232.
>I have not downloaded it yet, but saw what I took to be a free program
>on their site to use with the radio.

1945. HELP!!!!! Kenwood and GE: Radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Joe F <nils@voyager.net>
Message-ID: <38cc154b$0$1386@news.voyager.net>
Source record: 62560

I Need ANY and ALL MODIFICATIONS for the Kenwood TM D700A model radio and any manuals for the GE: Ranger series with the delta head using S825 Control Unit v.4.0 software.

PLEASE HELP ME!!!!!!!!!

Thanks
Joe F
nils@voyager.net

1946. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8co8q0.lk0.root@radioactivex.lebesque-al.net>
Source record: 62561
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In sci.physics.electromag Mike Lucas W5CHR <lucascom@email.msn.com> wrote:
>> Bilge wrote in message ...
>>> ...
>>> energy (stealling joulery, perhaps?) is not consistent with anything
>>> ...
>
>> You are hereby placed on report for perhaps the SECOND worst pun I've seen
>> on the internet!
>
>What was the worst? If Bilge has failed to deserve that honor, then so
>be it (although it's a sad message for us at s.p.em). But then at least
>we want to know by whom, and how, this defeat was caused.
>
>Sir, I demand more information!
>

Me, too. I was going for the gold. I demand a recount.

--

1947. Re: 12 guage enamel covered wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <38CC3EEE.409A@pacbell.net>
Source record: 62562

Reg Edwards wrote:
>
> > Then I don't have to turn the fellow
> > down when he asks me for a date.
> ==========================
> Do you mean you'd accept the invitation ? ;o)

My wife of thirty years would be distraught if I suddenly changed my sexual orientation. One has to choose one's words carefully on this newsgroup. I wrote the above without carefully thinking through all the ramifications. I'll have to cut back on the consumption of roast beef and cold beer. The roast beef, in particular, is hard on the thought processes.

Tom Donaly KA6RUH

1948. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <38CC4E3B.5E@pacbell.net>
Source record: 62563

Willy Krogstad wrote:
>
> Hi gang!
>
> I would like to build my own shortwave receiver using tubes to learn more
> about vacuum tubes.
> Can anybody point me to web sites with schematics and info? Or are there
> good books on the subject available? I am not a radio amateur, but I have
> heard about (never seen) magazines like QST - I believe some of them contain
> building descriptions of various receivers?
>
> Any help to get me started.....
>
> Willy

Hi Willy,
you might want to see if you can get your hands on
the book Radio Receiver Projects You Can Build, by Homer T.
Davidson. Tab Books, ISBN 0-8306-4189-0. He has enough good
stuff to keep you occupied a long time.

Tom Donaly KA6RUH

1949. 10 minute ID timer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Scott Duckworth <revduck@icx.net>
Message-ID: <38CC5392.BDFA7584@icx.net>
Source record: 62564

Anybody got a set of plans for a simple 10 minute ID timer? E-mail me at
"mailto:revduck@icx.net".

--

God Bless You!
God's Plan of Salvation (1) All are sinners.
(2) Christ paid the price for you on the cross.
(3) Repent of sin and ask Jesus to come into your heart and save you.
(4) Follow God's will for your life.

Scott Duckworth
Blessed Assurance Ministries
http://user.icx.net/~revduck/Blessed.htm
Amateur Radio Operator KF4ZHD
http://www.qsl.net/kf4zhd
ICQ Me at #32622510
AOL IM= kf4zhd

1950. !!!!!!Can anyone Help me fix my Kenwood or GE??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Joe F <nils@voyager.net>
Message-ID: <38cc5bde$0$19364@news.voyager.net>
Source record: 62565
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

I Need ANY and ALL MODIFICATIONS for the Kenwood TM D700A model radio and any manuals for the GE: Ranger series with the delta head using S825 Control Unit v.4.0 software.

PLEASE HELP ME!!!!!!!!!

Thanks
Joe F
nils@voyager.net

1951. Re: Price of a Yeasu 2100B?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <L01z4.3215$QF6.147330@news5.giganews.com>
Source record: 62566

I think that's a bit high, probably more like $400 to $500 I would think.
It depends on how good it looks; those old Yaesus didn't have such great
paint jobs.

73, Bob K6DDX

1952. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8ajb5tddj1@nntp9.atl.mindspring.net>
Source record: 62567

In article <blackm00-1103002351350001@dialup-284.hip.cam.org>,
Michael Black <blackm00@cam.org> wrote:
>In article <8adnoi$c6e$1@nnrp1.deja.com>, dr.dongle@juno.com wrote:
>
>>{lots deleted]
>> Thank you, I recieved the e-mail/w schematic. Is there a URL or a
>> magazine artical with this recieve info?
>> your help is greatly appricated.
>> dr.d
>
>This idea of Jan-Martin's doesn't originate with a particular device. The
>basic idea is that a double balanced mixer is used for CW/SSB, with
>a locally generated oscillator signal in the other input, which beats
>the incoming signal down to audio frequencies.
>
>For AM, if you put the incoming signal through a limiter, you will get a
>locally generated constant voltage signal at the carrier frequency to use
>instead of a BFO; again that signal beats the incoming signal down to
>audio frequencies.
>
>I saw this scheme for AM in an article about the MC1496 double balanced
>mixer 30 years ago;

There was a multimode detector project article in QST about 5 years ago
that used an FM IF (NE604?) for FM and a NE602 for the AM using these
techniques.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

1953. ACTIVATION

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: arvm <arvm@mail.telepac.pt>
Message-ID: <8afs5i$ub5$4@duke.telepac.pt>
Source record: 62568

ACTIVATION
A.R.V.M. Aldeia da Luz
Date: 18 / 19 March
SPECIAL CALL: CQ7LUZ
ITU37 IM58HI
Freq&#65533;s: 40M * 14.195Mhz * 21.295Mhz * 28.695Mhz * 145.350Mhz * 434.350Mhz
http://www.qsl.net/arvm/aldeiadaluz/
73&#65533;s

- -
-

1954. repair info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: mark pullen <mpullen@melbpc.org.au>
Message-ID: <38CA6DC1.50BA5C9D@melbpc.org.au>
Source record: 62635

Can anyone suggest a good place to get a kit built freqency meter
repaired prefferably in melbourne.
regards
mark.

1955. Re: High Voltage connector sets (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Constantine <wa1wla@juno.com>
Message-ID: <8aerht$435$1@nnrp1.deja.com>
Source record: 62636

In article <38C6B610.24C40FBB@pa.net>,
"a.p." <apight@pa.net> wrote:
> I am searching for some good high voltage connectors. 'have
> heard that the old style connector (Millen, I think) is not
> preferred these days. What do you have in your goodie box
> that is newer. SHVs? maybe. .for that matter do you have any
> Millen. . .I can mount em on Plexiglas if necessary. .
> .'need two sets. . plugs, receptacles. . even some HV red
> and black wire if ya got it. . .
> Art

Even if someone gave you a Millen, please THROW it away. The contactor is almost exposed, and with the weight of the wire it WILL be exposed. Look around for an Amfenol multi pin, take it apart, remove the pins and use only the center pin. That is what i did for a 3750 volt supply. Mine has a diameter of 1 1/2" and the pins are heafty. They are all over junk boxes in fleamarkets. 73 De Constantine

Sent via Deja.com http://www.deja.com/
Before you buy.

1956. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cm1lv.fr7.root@radioactivex.lebesque-al.net>
Source record: 62637
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <=bvKOFgE21xD4pF4WB0dnkx8ptMB@4ax.com>,
>
> But because of resonance, the circuit stores energy from
> previous cycles. That is critically important, and that's
> why "impedance matching" is too limited to truely describe

You might want to look at the definition of Q before settling
on this description. Then look at the Q for a resonant circuits
with both large and small Q, i.e., { f \over\Delta f }. The
result of storing energy means your bandwidth goes DOWN.
Why? Because the signal cant change faster than you remove
the energy and remain distinguishable from the that coming
in on the next cycle. By making the antenna small and resonant,
you lose bandwidth. Since you are storing energy longer, at
least in principle, you can make up for the small size by
sacrificing bandwidth.

> what is happening. Also, if the wavelength is long, the
> resonant antenna can absorb energy which would other
> wise miss it by a large number of antenna-lengths. That
> is part of impedance-matching too, but it is hidden because
> "impedance matching" in this situation is only one
> viewpoint, and it has serious limitations if expanded insight
> into the physics is the goal.
>

No. The insight is when you realize just how interrelated all
of this and how the puzzle pieces fall into place so that you
don't need to invent new ways to explain ordinary events.

> I see the difficulty. You seem to be arguing that BECAUSE
> it is an impedance matching issue, it IS NOT a matter of
> resonance. As if there was one right answer, and we must

Resonance IS an impedance issue. By definition, resonance occurs
when Z = 0. Impedance matching is obviously an impedance issue.
It may or may not be as obvious, but the boundary conditions at
the dielectric interface of the antenna and the media surrounding
it, completely determines the impedannce mathching.

> say is sort of like blasphemy. It is an alternate "religious
> position" which, because it is ALTERNATE, is perceived

Don't start with the all viewpoints are equal bit. That may
fly for religion, but here you need to provide some evidence

of this "energy sucking". According to your assertion of a
"grab" over 1000 wavelengths away, I should be able to
set up one of these and a measure a drop in field stregth
several counties away. That is, of course, unless it also
creates a replacement so you cant tell but do violate
conservation of energy.

> as being incompatible. No. It is only alternate. But if you

Telling people that gravity occasionally makes things fall "up"
doesnt make it an alternate approach merely because one doesnt
understand the way a volcaano erupts. You cant just lump effects
you don't understand in with what you think would be a cool cause.

> believe that there is "one right answer", then the
> existence of alternate viewpoints must be "wrong"

In this case, it is wrong, regardless of whether it's blasphemey.
There may be better theories of everything, but you should cut
your lossage on this one.

> somehow. (And from my viewpoint, if there are several
> ways to view a phenomenon, and they give differing
> insights, then the focusing on "one right answer", and
> the attacks on other viewpoints, THAT is the
> blasphemy.)
>

It's usually best if whatever approach one takes remains compatible
with observed phenomena. Fields reaching out of the deep and grabbing
energy (stealling joulery, perhaps?) is not consistent with anything
that has been reported.

1957. tuner parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <38CB0D67.1F48D41F@netdoor.com>
Source record: 62638

I am looking for some rods to reach from the front face and the knob of a homebrew antenna, needs to be 12 or 13" long 1/4". Perhaps another material? I also need a small turns counter. Any help appreciated.

Butch KF5DE

1958. Re: DSP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Ron Murias <ron.murias@nospam.home.com>
Message-ID: <m3snxwj26i.fsf@murias.dhs.org>
Source record: 62639

There's a little more to it than that, John. Depending on what you want the filter to do, it may reside in software for a DSP chip, or perhaps on an ASIC or some other programmable hardware. Unlike conventional filters, the characteristics of a DSP filter are *programmed* rather than defined exclusively by the hardware.

There is, however, a place you can go for more information. Steve Smith has an introductory text out, and he's posted the entire contents on the web:

http://www.dspguide.com

Another excellent text is Rick Lyons' book, which I'd strongly recommend if you want to explore further. This DSP stuff is a great area to explore. Good luck!

Ron

"John R. Glazier" <glazier.john@mcleod.net> writes:

> Any direction of where I can find a schematic for a DSP filter? Thanks
> for your time.
> John KI0OF
>
> --
> --
> Click here for Free Video!!
> http://www.gohip.com/freevideo/
>
>

1959. Re: tuner parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Lynn Coffelt <coffeltl@home.com>
Message-ID: <8nFy4.59791$_G1.758326@news1.sttls1.wa.home.com>
Source record: 62640

"Butch Magee" > wrote in message ...
> I am looking for some rods to reach from the front face and the knob of
> a homebrew antenna, needs to be 12 or 13" long 1/4".

Some good stuff is brass brazing rod- 1/4", and I think 3 feet long at
welding supply or automotive parts stores.
Lynn W7LTQ

1960. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <IxHLOFxZpwbrbiKYRRdw5mETGXOq@4ax.com>
Source record: 62641
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Sat, 11 Mar 2000 23:57:25 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>In article <=bvKOFgE21xD4pF4WB0dnkx8ptMB@4ax.com>,
> Gary Coffman <ke4zv@bellsouth.net> wrote:
>> On Mon, 06 Mar 2000 19:42:09 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>> > Yes, that's the key question: does connecting a tank
>> > circuit to a short dipole (or small loop) cause it to
>> > absorb MORE energy from the incoming waves?
>>
>> And the key answer is NO. Resonance has nothing
>> to do with the amount of energy intercepted by the
>> antenna.
>
> But because of resonance, the circuit stores energy from
> previous cycles.

That's your assertion, but saying it doesn't necessarily make it
so. A *high Q* circuit stores energy, but there is no requirement
that a resonant circuit be high Q, nor is there a requirement that
a high Q circuit be resonant. All that is required to have a high Q
circuit is for the ratio of reactance to resistance to be large. That's
very different than the criteria for resonance, where inductive and
capacitive reactance have to be equal. Both could be negligible
compared to resistance, and the circuit would still be resonant,
but Q would be very low.

Now a very short antenna (in terms of wavelength) is extremely
capacitively reactive. It also has an extremely low radiation
resistance. So a short (unloaded) antenna *is* high Q, but that
is regardless of whether it is resonant or not. Resonance has
nothing to do with the amount of energy storage a very short
antenna has. Nor does resonance have anything to do with
whether the antenna intercepts energy or not (for a different
reason).

Note that I said that a short *unloaded* antenna has a very high
Q. The moment you load it, in order to extract energy from it,
the Q drops sharply. So if you are trying to pull energy from this
circuit, it isn't an extremely high Q circuit anymore. And if you
don't pull the energy from the antenna, it will be re-radiated
and lost forever. Catch 22.

>That is critically important, and that's
> why "impedance matching" is too limited to truely describe
> what is happening. Also, if the wavelength is long, the

> resonant antenna can absorb energy which would other
> wise miss it by a large number of antenna-lengths. That
> is part of impedance-matching too, but it is hidden because
> "impedance matching" in this situation is only one
> viewpoint, and it has serious limitations if expanded insight
> into the physics is the goal.

Again, that is just your assertion. As I mentioned in a previous post, there is no localization of energy until the quantum probability wave function collapses. If any part of a photon encounters a charged particle in the antenna, the wave function collapses and *all* of the photon's energy is transferred to the charged particle (usually an electron).

The photon energy is E=hv, where v is frequency and h is Planck's constant. The "size" of the photon is inversely proportional to its energy. Low energy, and consequently low frequency, photons are very large. Or said another way, they have a large wavelength. But the energy of the photon is not localized until the wave function is collapsed. You can't say that some of it misses a nonresonant antenna while a resonant antenna "sucks" it in. That's not correct. The quantum is all or nothing. It is the smallest unit of radiant energy that can exist at that frequency. If the antenna receives any of its energy, it receives *all* of its energy. That's true regardless of whether the antenna is resonant or not.

Now I put "size" in quotes in the previous paragraph because the size is not a classical size. What is meant is the probability density function has a large non-zero area. We can't localize the photon, or its energy, until that wave function collapses. The presence of charged matter in that area of non-zero probability can collapse the wave function, localizing the photon and its energy at the position of the charged particle. There really isn't a classical equivalent of this, but the classical explanation that the presence of charged matter distorts the permeability and permitivity of the space in its vicinity so that the field lines converge on it says a similar thing, though it is physically inaccurate. (The math works, but the physics doesn't. We thought it did at one time, but we have a better understanding now, and know that it does not.)

>> >More
>> > specifically, if we connect just a resistive load to
>> > a short dipole and adjust that resistor for maximum
>> > received power, can we receive even MORE power if we
>> > then connect a lossless tank circuit across that dipole,
>> > then re-adjust that resistor value for maximum power?
>> > These papers imply that the answer is yes:
>>
>> My answer is also yes, but not because the antenna
>> intercepts more power. It is because the circuit is made
>> non-reactive by being resonated, allowing more power

>> to flow into the load instead of being re-radiated. In other
>> words, it is a circuit matching issue.
>
> I see the difficulty. You seem to be arguing that BECAUSE
> it is an impedance matching issue, it IS NOT a matter of
> resonance. As if there was one right answer, and we must
> get rid of any other viewpoints. This is improper, in my
> opinion, because in order to understand anything completely,
> you have to look at it from all possible viewpoints. I realize
> that I violate some particular belief when I say such a thing,
> and it causes people to raise objections and become
> argumentative.. If we're SUPPOSED to view it only
> as circuit matching, and never in any other way, then what
> say is sort of like blasphemy. It is an alternate "religious
> position" which, because it is ALTERNATE, is perceived
> as being incompatible. No. It is only alternate. But if you
> believe that there is "one right answer", then the
> existence of alternate viewpoints must be "wrong"
> somehow. (And from my viewpoint, if there are several
> ways to view a phenomenon, and they give differing
> insights, then the focusing on "one right answer", and
> the attacks on other viewpoints, THAT is the
> blasphemy.)

You seem to think this is a religious argument. It isn't.
Nature either works a certain way, or it doesn't. As we
increase our understanding of the way Nature works,
we may at rare intervals have to accept a paradigm
shift, and view Nature in a different way. In other words,
our previous understanding was *wrong* in some way,
and we have to adopt a new view which is not wrong
in that way, but our new view still has to be right in all
the ways the old view was right.

We still probably don't have the whole story, but we
now know that any explanation that is wrong in that
old way is still wrong, and any explanation that violates
things that we now know are right, is also wrong. Your
hypothesis falls in that category.

Now sometimes we can have several alternative
explanations, and none of them seem to violate
anything that we know is right, or fail to denounce
anything that we know is wrong. In such cases,
we apply Ockam's Razor and choose the simplest
explanation that adequately explains all observations.

As another poster said, we can explain anything if
we throw in enough hidden variables. But Ockam
says that the explanation with the fewest such
hidden variables is the one we should embrace.

Einstein put it this way, "An explanation should
be as simple as possible, but no simpler."

>> P = E * I * cos(theta)
>>
>> When theta is 0, power out of the circuit is maximized.
>
> Right. Heh. AT RESONANCE, power out of the circuit is
> maximized, and if the freq of the incoming wave should
> change, it's no longer at resonance, so the effect doesn't
> work. To make it work, sweep the frequency of the
> transmitter around until resonance is achieved in the
> receiver.

This equation describes the transfer of energy from the
antenna to the load. It has nothing to say about transferring
energy from photons to the antenna.

> Johnathan Swift had things to say about big-endian versus
> little-endian warfare in GULLIVER'S TRAVELS. It is
> particularly appropriate in any physics debate, since often
> the fight is over the One True Way to "crack" a
> complicated "egg."

Well, not if one of the ways works the way we understand
the laws of Nature say it must work, and the other way
requires us to discard fairly fundamental and well tested
laws of Nature in order to embrace it. If we were to embrace
your hypothesis, we'd have to revise most of QED. Now
QED works very well, we don't know of anything that it fails
to properly explain (within its scope), so we're very loath
to have to discard it just so you can have your energy sucking
resonant antennas.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

1961. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: Lynn Coffelt <coffeltl@home.com>
Message-ID: <NwFy4.59900$_G1.758202@news1.sttls1.wa.home.com>
Source record: 62642

Some awfully good stuff for this purpose is "GTO-15". It's designed (I think) for neon sign high voltage wiring, the "GT" standing for "gas tube". Short pieces should be available from neon sign builders or installers if you ask them nicely.
Lynn W7LTQ

1962. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1203000006290001@dialup-284.hip.cam.org>
Source record: 62643

In article <8a75in$mg6$1@nnrp1.deja.com>, dr.dongle@juno.com wrote:

> I'm home brewing a 50-900 Mhz reciever similar to the one in the
> current issue of 73 magizene. I have a nice Sony digital tuning
> varactor tuner, in which I have disabled the control/synth chip and
> will control tuning with a pot to the varactor ckt. The original IF is
> a second modual with a 1 chip combined video/IF and Sound/IF with a 4.5
> Mhz filter between the two sections of the chip. The 41 Mhz video carrer
> normaly acts as a mixer oscilator input for the sound IF. There is also
> a 45 Mhz SAW filter (wide band) between the tuner and the IF chip.
> I would replace the SAW filter with a nerrow band 45 Mhz filter (15
> K), and install a FET buffer between the filter and the IF amp
> input.
> Next I would replace the 4.5 Mhz Ceramic filter between the Video/IF
> and Sound/IF with a SA 612 Mixer IC and use a mixer oscilator frequency
> of about +/- 44 Mhz.
> All this (I think) should render a combination of an AM output from
> the video output and an FM output from the sound output.
>
> Now, can any one find a hole in my plan and if so what is it and can
> it be easly fixed?
>
> My other option is to use the 45 Mhz nerrow band filter, a buffer fet,
> a 612 to convert the 45 Mhz IF to 10.7 Mhz for FM with a FM detector
> chip and add a second 612 to convert the 10.7 to 455 Khz for AM, with a
> third 612 as a 445 Khz mixer for SSB.
>
> All constructive input appricated.
>

One thing to watch is that the front end may not be all that stable. It
will be running at fairly high frequencies, and is intended to be locked
to a reference frequency. Even in the old days, nobody worried much
(no could they do much to improve) stability since the IF of a TV set
is relatively wide.

When you start dealing with narrow band signals, the stability of the front
end may be an issue. I've certainly thought about making a nice
general purpose receiver with a TV tuner as the front end, but I don't
think it would be stable enough to be useful (though for wide band signals
or IF bandwidths, it may be fine). Locking it would get around the problem,
but the channels are of course 6MHz apart, and the prescaler in TV tuners
tend to divide by so much that you can't get narrow steps.

Another point is that if you scrounge up a 45MHz filter for the
first IF, you might want to do some more scrounging and scrap the TV
IF strip. At least some old cell phones had a 45MHz first IF, and
scrounging one would get you the needed filter, and a whole narrow
band IF strip. All three cell phones I've taken apart, all the clunky
older kind that nobody wants but the parts are nice and big, had
high first IF's and converted down to 455KHz for amplification and
detection. The advantage is that you'd also get a crystal to make
the converstion from the first IF to 455KHz. The disadvatange is that
two of the three cellphones had an IF higher in frequency, somewhere around
80MHz which may or may not be a problem in your project.

Some of those cellphones have the IF in a nice little module, relativley easy
to extract from the rest of the circuitry.

Once you've converted to 455KHz, you could then add a narrower filter
for AM and SSB, or use Jan-Martin's scheme to turn the FM detector into
a multi-mode detector.

Michael VE2BVW

1963. SB-220/221 parts for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-12 00:00:00 UTC
From: qroking@aol.com
Message-ID: <20000312012531.03835.00001631@ng-cg1.aol.com>
Source record: 62644

Have some SB-220/221 parts for sale......
1.Original plate choke
2.80/40/20 meter input coils with micas
3.loading variable capacitor
4. replacement blocking cap and HV bypass caps
5. Hi freq tank coil
6.SB-220 input bandswitch wafer
7.SB-221 complete bandswitch

If interested in any of these parts, please e-mail me.....Thanks 73 LOU

1964. SRF1800 VHF BJT info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: M.R.Loudon@massey.ac.nz
Message-ID: <CcXy4.253$wG2.4297@news.clear.net.nz>
Source record: 62569

Hi,

I'm wondering if anyone can help me, I have some Motorola SRF1800 BJTs that I believe are 40W 80MHz devices. What I don't know is what voltage they are. I have checked the Motorola site but its not there and none of my catalogues list it. Any info appreciated,

Malcolm

1965. Re: SRF1800 VHF BJT info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38CC34E5.893819A2@cmcorp.com>
Source record: 62570

Malcolm Loudon wrote:

> Hi,
>
> I'm wondering if anyone can help me, I have some Motorola SRF1800 BJTs that I
> believe are 40W 80MHz devices. What I don't know is what voltage they are. I
> have checked the Motorola site but its not there and none of my catalogues
> list it. Any info appreciated,
>
> Malcolm

Any SRF device is protected device, you will not get an specs on it.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

1966. Antenna tuner back plate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <38CC46F8.552F6056@netdoor.com>
Source record: 62571

Hello, I am building an antenna tuner in a really great cabinet with chassis board. I originally bought this for a 35 amp power supply which did not come to fruition. It has for a back cover plate one that is screened like with lots of closly spaced holes. Will this "holey" back cover cause me any problems with RFI? I do not recall ever seeing a tuner with a holey back. Any help appreciated.

Butch Magee KF5DE

1967. VHF Motorola Pulsar Info Wanted:

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: cobrano-spam@budweiser.com
Message-ID: <38cc3ff7.2042824@news.thegrid.net>
Source record: 62572

Looking for info on converting a VHF Pulsar for a full duplex repeater
on the 2 meter Ham Bands. I seen alot on UHF models but none on VHF.
Any help is appreciated.
The KF6FOZ BBS
Redding, CA.
530-229-0896

Visit my Website for other stuff and more info on
the BBS. Even a good list of Sale and Swap sites
on there.
http://www.qsl.net/kf6foz/main.htm

1968. Re: Gunnplexers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: pmunsel@aol.com
Message-ID: <20000312205317.01746.00002375@ng-bg1.aol.com>
Source record: 62573

I found the following info later in this list.
8 each Ma-Com Model MA-86501 Gunnplexers for sale
Original freq was 10.525 Ghz, and looks like he retuned them to 10.400 Ghz.
They were offered by Bob Partain K6OHH
e-mail is k6ohh@qsl.net
Hope this helps, if not I printed out the entire post, and will send it to you.
73,
Paul Munsel N5XMV

1969. Re: Price of a Yeasu 2100B?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: screutec@aol.com
Message-ID: <20000312210235.02808.00002012@ng-bh1.aol.com>
Source record: 62574

600.00to900.00

1970. Re: Antenna tuner back plate

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <38cc5231.9342875@news.mcn.org>
Source record: 62575

No

\On Mon, 13 Mar 2000 01:42:56 GMT, Butch Magee <butchkay@netdoor.com>
wrote:

>Hello, I am building an antenna tuner in a really great cabinet with
>chassis board. I originally bought this for a 35 amp power supply which
>did not come to fruition. It has for a back cover plate one that is
>screened like with lots of closly spaced holes. Will this "holey" back
>cover cause me any problems with RFI? I do not recall ever seeing a
>tuner with a holey back. Any help appreciated.
>
>Butch Magee KF5DE

1971. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: tiuk@aol.com
Message-ID: <20000312222216.28896.00000681@ng-fv1.aol.com>
Source record: 62576

Hi Willy,

Try the following links & see what you may find of interest. Good luck.

Roman, N2CDD

http://members.aol.com/caschwark/homebrew.htm

http://www.mines.uidaho.edu/~keng/sch/

http://www.geocities.com/CapeCanaveral/Hall/8701/hamfiles.htm

http://www.ac6v.com/

1972. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cooj3.lk0.root@radioactivex.lebesque-al.net>
Source record: 62577
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

```
>
>Bilge wrote in message ...
>> >And try this ftp for some exchages about that B(3) stuff. I'll have to
>read
>> >up and see what its about.
>> >http://www.navi.net/~rsc/physics/B3/evans/
>> >
>>
>> Don't bother. From what I can tell, it's about being mistaken.
>>
>I quickly scanned the 462sumry.zip file (PDF) and it made a little since.
>Wish I could understand it better. Where's the mistakes?
>
```

Well, for starters, Sec. 3 notes that the theory was developed to explain explain the discovery of the field described in Sec 2 and references 1-7. Look at the citations given for references 1-7. Second, the theory hinges completely on a non-zero photon mass and while he asserts the photon mass may be very small, I didn't see an estimate of how small it could be before invalidating his data. The limit on the photon mass at the time of Jackson, 2nd edition, is < 4 x 10^48 gm or equivalently it takes more than 10^20 photons to equal the mass of one electron as an upper limit. Since the impetus for this theory appears to have originated from experiment, it would be useful to know what the theory predicts it should be. Either it was left out or I didn't see it, but I would think the data would provide a lower limit where the effect wouldn't have been noticeible below.

Now, any non-zero photon mass allows the theory to be at least in the running if it's consistent with observation. But, it's always been the case that a non-zero photon mass requires fixing the current models. You need only look at the qed lagrangian under the replacement of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge invariance. Any non-zero mass leads to most of the effects mentioned like longitudinal polarizations, light not travelling at c, etc. What isnt there, in the paper, are independent data that an effect exists in need of the theory. In addition, the statements regarding weinberg-salaam (GWZ in this paper) are misleading. Yhe photon mass wasn't ignored, it's explicitly zero by construction so that E&M retains its gauge invariance, and charge is conserved.

1973. Re: DSP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8aiajmdpl1@nnrp1.deja.com>
Source record: 62578

In article <38CAE509.378450C9@mcleod.net>,
glazier.john@mcleod.net wrote:
> Any direction of where I can find a schematic for a DSP filter?
Thanks

Just buy one of the low-cost DSP evaluation kits sold by TI, Motorola
or Analog Devices, and write your own filter software for it. They cost
about $100 and come with development software.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

1974. Surface mount suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <38CCFFBA.B0803449@umich.edu>
Source record: 62579

I am about to attempt a repair on a SMD-based HT. Yaesu was kind enough to supply the key part (free, in fact! I'm impressed). Should be fun - but I'm used to wires and leads, not SMD. Anyone have hints on how to unsolder and replace a SMD transistor in a densely-packed circuit?

Bob, KI8AB

1975. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8aj816$ia7$2@news.IAEhv.nl>
Source record: 62580
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag, Bilge wrote:

> Now, any non-zero photon mass allows the theory to be at least
> in the running if it's consistent with observation. But, it's always
> been the case that a non-zero photon mass requires fixing the current
> models. You need only look at the qed lagrangian under the replacement
> of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge

Provided, of course, that your \phi is not a constant. And strictly
speaking, you should not look at the QED lagrangian (because that one
_is_ gauge invariant) but to the QED lagrangian with a mass term
added, e.g. the Proca lagrangian.

[Bilge gives a perfect guideline for further study here, but I thought
I'd turn it into a simple answer, as some posters sometimes ask for.]

> invariance. Any non-zero mass leads to most of the effects mentioned
> like longitudinal polarizations, light not travelling at c, etc. What
> isnt there, in the paper, are independent data that an effect exists in
> need of the theory. In addition, the statements regarding weinberg-salaam
> (GWZ in this paper) are misleading. Yhe photon mass wasn't ignored, it's
> explicitly zero by construction so that E&M retains its gauge invariance,
> and charge is conserved.

But they _could_ have considered the case with broken gauge invariance.
In fact they did break the rest of the gauge invariance, so why not the
photon too. It is in that sense, that the photon mass was ignored.

And with good reason. Since it isn't observed, it would just be an
unnecessary complication (for a "standard model", that is).

-- Jos

1976. Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: RadioCom <daveaa1a@xensei.com>
Message-ID: <scq9cloga5n112@corp.supernews.com>
Source record: 62581

Am thinking Tesla coils make for good efficient antennas as well.

Now driving 400 hz sq, wave to Audio Amp and keying 400volt DC

into automotive spark coil, thence to the High Q tuned circuit

for megga spark at about 500 khz.

Anyone doing this sort of thing here?

73s from Dave Riley - AA1A - www.radiocom.net

1977. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cqi7r.t9a.root@radioactivex.lebesque-al.net>
Source record: 62582
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In sci.physics.electromag, Bilge wrote:

>Provided, of course, that your \phi is not a constant. And strictly
>speaking, you should not look at the QED lagrangian (because that one
>_is_ gauge invariant) but to the QED lagrangian with a mass term
>added, e.g. the Proca lagrangian.
>
I really get tired of writing \phi(x) rather than \phi (actually, I get
tired of writing \phi, but I dont think ï¿½(x) shows up on all systems,
not to mention being in violation of the rfc's). I mentioned the qed
lagrangian specificallly because it is invariant to point out that adding
the mass term ruins it.

>[Bilge gives a perfect guideline for further study here, but I thought
> I'd turn it into a simple answer, as some posters sometimes ask for.]
>
>But they _could_ have considered the case with broken gauge invariance.
>In fact they did break the rest of the gauge invariance, so why not the
>photon too. It is in that sense, that the photon mass was ignored.
>
It requires a deliberate choice to arrange the four fields into an
isodoublet and a particular choice for vacuum to obtain a massless
photon. I would consider "ignored" to mean not making such a choice
and writing off the unphysical results as unimportant or artifacts.
They can't have not considered the possibility of a massive photon.

>And with good reason. Since it isn't observed, it would just be an
>unnecessary complication (for a "standard model", that is).
>

Since I've previously seen several claims (by the claiments, even)
for new forces . Remeber the 5th-force that was supposed to work aggainst
the gravitational force but was proportional to baryon number and had
a range of something like 100 meters or technicolor (which had some
neat features, but doesn't appear to have panned out)? I am dubious
of claims for more particles that we don't need. We still havent found
all the ones we do need. The standard model must obviously be incompplete,
but more free parameters go the wrong direction. Especiaally when the
only data and the theory originate at the same place and there's been
at least 6 years for someone else to produce one.

1978. Re: 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Cortland Richmond <Cortland.Richmond@usa.alcatel.com>
Message-ID: <38CD457D.5ADF0594@usa.alcatel.com>
Source record: 62583

He could always link couple a carbon mike to the antenna!

Cortland
(ka5s@saber.ent)

Richard Hosking wrote:

> On Fri, 10 Mar 2000 11:45:51 +0000, phil
> <phil@invest.fsbusiness.co.uk> wrote:
>
> >I wonder if anyone can point me to any Internet sites describing a top
> >band solid state pll AM tx.
> >
> >I have several pll designs but unsure of which type of modulator to go
> >for.
> >
> >I'd like to keep things as simple as possible and try and find a way
> >around the need for any modulation transformers.
> >
> >Any help appreciated.
> >
> >(((73)))
> >
> >Phil G4ZOW
> Gday Phil
>
> A free running VFO should be stable enough for AM. Alternatively use a
> 1834 KHz crystal - these were used in XT computers for ?video card
>
> If you want a high level mdulator you could use a switch mode FET as
> the power amp (class D efficiency should be up around 90%) and a
> switch mode power supply with the audio varying the duty cycle of the
> PSU (pulse width modullation). You obviously need a filter after this
> to get rid of the switch mode subcarrier (say around 100KHz)
>
> Another possible scheme I have seen uses logic inverters as an
> oscillator with a cystal. Following the oscillator is an RC integrator
> circuit which converts a square wave from the oscillator to a
> triangle wave which is then DC summed with the audio signal. This
> combination is applied to another logic inverter - the effect is again
> to produce a PWM signal. Again this can be amplified in a class D
> system, though I am not sure of the spectral purity.
>
> If you wanted to get really fancy you could use the new DDS chip from
> Analog Devices (AD9853) which can be amplitude modulated with a

> digital signal though this would be quite involved.
>
> I would be interested to know if anyone has actually done any of this
>
> Richard
> http://www.iinet.net.au/~richardh/VK6BRO.htm
>
> zaprichardh@iinet.net.au
> (remove the zap)

1979. Re: Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38CD4882.8014B2DD@valley.net>
Source record: 62584

RadioCom wrote:

> Am thinking Tesla coils make for good efficient antennas as well.
>
> Now driving 400 hz sq, wave to Audio Amp and keying 400volt DC
>
> into automotive spark coil, thence to the High Q tuned circuit
>
> for megga spark at about 500 khz.
>
> Anyone doing this sort of thing here?

Hello--

Actually, IIRC the Tesla Coil relies on a high resonant Q for its voltage-stepup
capabilities, and in general high-Q circuits don't allow for a lot of information
bandwidth.

Also, a typical Tesla Coil is physically a small fraction of a wavelength and hence
not an efficient RF radiator. You'll need to string lots of wire between trees, instead.

BTW, if you did key up a monster Tesla Coil into a large antenna, you'll generate
RFI, EMI, HAI, EOI, CBI, CTI and just about every flavor of "I" you can-- and can't--
imagine. So, unless you want the Feds, your fellow radio amateurs and (worst
yet) a bevy of irate CBers on you like chickens on a June bug, stay in-band and go
for a clean signal instead.

73,
Brad AA1IP

1980. Re: Surface mount suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38CD46F7.9429AFEA@valley.net>
Source record: 62585

Robert Lyons wrote:

> I am about to attempt a repair on a SMD-based HT. Yaesu
> was kind enough to supply the key part (free, in fact! I'm
> impressed). Should be fun - but I'm used to wires and
> leads, not SMD. Anyone have hints on how to unsolder and
> replace a SMD transistor in a densely-packed circuit?
>
> Bob, KI8AB

Hello--

IIRC, there's a FAQ available-- post your inquiry via
sci.electronics.repair
and ask for the FAQ's address plus any hands-on tips readers can
contribute;
it's a very helpful newsgroup.

73,
Brad AA1IP

1981. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <1Mcz4.11680$84.1182666@alfalfa.thegrid.net>
Source record: 62586

William,
This wire will work just fine. The potential from one winding to the one next to it is quite low. The potential from one layer of windings to the layer above or below it isn't much either. Insulate the windings from the core, add insulation at the 'ends' of each wire as it comes out of the winding, and you'll be fine. You can also mount the transformer on insulators.for more 'peace of mind'.
William J. Erwin(Bill) wrote in message ...
>I am looking for advise on adding additional insulation to std. wire that
>has an outer covering rated at 600 - 800 volts. I am building a power
supply
>that has an unloaded voltage of around 3KV. Is it safe to use flexible
>plastic tubing to increase the working voltage of the existing low voltage
>outer covering?
>
>Thanks in advance,
>Bill
>
>

1982. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <83dz4.17414$84.569439@elnws01>
Source record: 62587
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...

> You need only look at the qed lagrangian under the replacement
> of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge
> invariance.

You have lost me. Does this mean that if a photon has a mass, the photon's fields will not conserve energy, depending on the reference frame between the photon and an observer?

Scott

1983. Re: Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8cqqe3.o2q.X@animas.frontier.net>
Source record: 62588

On Mon, 13 Mar 2000 14:58:58 -0500, Brad Thompson scribbled:
>
>RadioCom wrote:
>
>> Am thinking Tesla coils make for good efficient antennas as well.
>trees, instead.
>
>BTW, if you did key up a monster Tesla Coil into a large antenna, you'll
>generate
>RFI, EMI, HAI, EOI, CBI, CTI and just about every flavor of "I" you
>can-- and can't--
>imagine.

Darn!!! Just when I thought I had it all figgered out for the
new bonus points catagory in the ARRL FD: "...demonstration of
a 'nontraditional' amateur mode...".

Jonesy W3DHJ

--
SK

--
Marvin L Jones jonz--AT>>frontier.net | W3DHJ
Gunnison, Colorado | Jonesy
7,703' -- 2,345m | DM68mn

1984. Re: Advise on insulating wire for high voltage power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38CD7538.4674@pop.removethistomailme.net>
Source record: 62589

Gord Skiffington wrote:
>
> Just as a further note....the least amount of insulation available for
> automotive wiring would be ok for lots of applications as it (older and
> maybe more likely available copper core) only had to contain systems
> producting up to 20Kv or so. The 8mm stuff is used both to insulate
> systems running up to 50Kv AND against extreme heat in todays cramped
> compartments or in high performance engines. Good ideas though!
>
> 73 - Gord

Yep. I have used Mallory 8mm copper-core ignition wire to pipe the
output of a 1.5MV Tesla coil across the room with minimal leakage. Very
nice stuff.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

1985. Re: Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38CD82DA.A570FED9@bellsouth.net>
Source record: 62590

RadioCom wrote:

> Am thinking Tesla coils make for good efficient antennas as well.
>
> Now driving 400 hz sq, wave to Audio Amp and keying 400volt DC
>
> into automotive spark coil, thence to the High Q tuned circuit
>
> for megga spark at about 500 khz.
>
> Anyone doing this sort of thing here?
>
> 73s from Dave Riley - AA1A - www.radiocom.net

The fad died out last century.

W4OP

1986. Re: Surface mount suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Kevin Ames <mtnclimb@in-tch.com>
Message-ID: <38cd9164@news.in-tch.com>
Source record: 62591

I have had good luck with two soldering irons.

Use one on each side, once the solder on both sides is melted, use the irons
as tweezers to pull the piece out.

Good Luck

73s

AA7YQ

Robert Lyons wrote in message <38CCFFBA.B0803449@umich.edu>...
>I am about to attempt a repair on a SMD-based HT. Yaesu
>was kind enough to supply the key part (free, in fact! I'm
>impressed). Should be fun - but I'm used to wires and
>leads, not SMD. Anyone have hints on how to unsolder and
>replace a SMD transistor in a densely-packed circuit?
>
>Bob, KI8AB

1987. Re: Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Jeff <djep@ix.netcom.com>
Message-ID: <38CDC8E2.C0C41A7C@ix.netcom.com>
Source record: 62592

not to mention the "Worked all Neighbors" award..... W8FBF/6

Kludge wrote:

> On Mon, 13 Mar 2000 14:58:58 -0500, Brad Thompson scribbled:
> >
> >RadioCom wrote:
> >
> >> Am thinking Tesla coils make for good efficient antennas as well.
> >trees, instead.
> >
> >BTW, if you did key up a monster Tesla Coil into a large antenna, you'll
> >generate
> >RFI, EMI, HAI, EOI, CBI, CTI and just about every flavor of "I" you
> >can-- and can't--
> >imagine.
>
> Darn!!! Just when I thought I had it all figgered out for the
> new bonus points catagory in the ARRL FD: "...demonstration of
> a 'nontraditional' amateur mode...".
>
> Jonesy W3DHJ
> __
> SK
>
> --
> Marvin L Jones jonz--AT>>frontier.net | W3DHJ
> Gunnison, Colorado | Jonesy
> 7,703' -- 2,345m | DM68mn

1988. Re: Help? Need G-10 rod

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-13 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <5Glz4.3861$QF6.213645@news5.giganews.com>
Source record: 62593

I had a similar need recently and ended up buying a four foot rod from Boedecker Plastics. I think they are in Texas; look them up on the web.

The piece I needed was larger than what you are seeking but they have lots of sizes.

73, Bob K6DDX

1989. Actuator info, pse (Aerial tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38cd8112.22780122@news.online.no>
Source record: 62495

got some actuators,
24V, 2 phase, 35 ohms, 7.5°/step
hope to use it for remote antenna tuning, but shat sort of pulses is
needed to drive it?

73 jan-martin
LA8AK

1990. Help? Need G-10 rod

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: n1bug@mint.net
Message-ID: <38cd837d.46482972@news.mint.net>
Source record: 62496

I am in the final stages of building a high power 2m amplifier and need some 1/4" diameter G-10 (fiberglass) rod. I could mail order it but 1) it often comes in long lengths and shipping charges go out of sight; 2) not all of the stuff is created equal... and I need to be able to thread the darn stuff. Yeah, that should be fun! I've covered a large radius near where I live and can not find any.

So... if anyone has a couple of feet of this material that looks half way decent (ie, doesn't fall apart when you scratch a fingernail across it!!) that they would sell, please contact me. I will pay you a fair price for it and be very grateful for the help.

73,
Paul N1BUG

1991. FA:Singer NM-25T Radio Interference and FS Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <38CD9355.55C9C60D@getnet.com>
Source record: 62497
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=281907637

1992. FA: "Collector Quality" Conar Twins

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <38CD9390.1E2EDA5@getnet.com>
Source record: 62498
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=282513967

1993. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8akaif$td7$1@nnrp1.deja.com>
Source record: 62499
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Before I go on about this, I'd like to know, have
you read either of those physics papers? If not,
then you are arguing about things being relayed to
you second hand and possibly misinterpreted by me.
The "energy-sucking antenna" discussion is a discussion
of those two papers. If anything else, reading them
will give you powerful ammunition for defeating my
arguments. And who knows, maybe reading the actual
arguments presented by professional physicists will
be more convincing than any arguments I can present.

I doubt it though. This whole thread is starting to
look like something from a debating contest, where the
object is to win at any cost, and where all sorts of
"debating tactics" become acceptable. If this is a
science discussion, then attaining new insights is the
goal, and "trying to win" is not.

((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1994. Re: Surface mount suggestions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: ritter@io.com
Message-ID: <38cdc1f1.291132@news.io.com>
Source record: 62500

On Mon, 13 Mar 2000 09:48:26 -0500, in <38CCFFBA.B0803449@umich.edu>,
in rec.radio.amateur.homebrew Robert Lyons <boblyons@umich.edu> wrote:

>I am about to attempt a repair on a SMD-based HT. Yaesu
>was kind enough to supply the key part (free, in fact! I'm
>impressed). Should be fun - but I'm used to wires and
>leads, not SMD. Anyone have hints on how to unsolder and
>replace a SMD transistor in a densely-packed circuit?

I have done it a couple of ways.

One way is to use a fine solder braid and a fine tip and move the
braid around a given pad until almost all the solder is gone.
Slightly pry up the device lead while hot using the iron tip or a tiny
screwdriver. When cool, use the tiny screwdriver tip as a lever if
necessary to break any remaining tin-lead bond.

Another way is to cover the transistor in hot solder, thus getting all
connections melted simultaneously. Then the part may stick to the
soldering iron tip and can be splatted down on the table or scraped
off, or a solder-sucker can be used to take up the whole mess. The
board can be cleaned by solder-sucking and/or solder braid.

Be careful when using braid. It can be surprisingly effective, but if
one does not keep it hot it will stick, which means it is soldered to
the pads, and then one is pulling on the pads. So use sufficient
heat, but not so much as to peel board runs off. One can feel the
braid stiffen as the solder solidifies.

Put one lead down first by holding the part and soldering one lead.
Make sure the part is in position before soldering the other leads;
re-melt the first lead and move the part if necessary. Then solder
the others. Then inspect each connection with a magnifying glass.

Be sure to try these things out a few times on scrap boards before
doing it for real.

Terry Ritter

1995. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38CDD9DE.C10E5614@xprint.ca>
Source record: 62501
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

The tactics employed by scientists are closer to debating
than you might allow. Can you imagine an exchange of letters
between a pair of competing scientists where one backs down
and says, "By George, you're right - my interpretation is
nonsense and I've completely bungled this analysis". It
never happens, at least not in public. It's not up to them
to resolve their differences - the test of time is the one
that counts.

J.Legris
change the x to s to reply

Science Hobbyist wrote:
>
[snip]
> This whole thread is starting to
> look like something from a debating contest, where the
> object is to win at any cost, and where all sorts of
> "debating tactics" become acceptable. If this is a
> science discussion, then attaining new insights is the
> goal, and "trying to win" is not.

1996. Re: Tesla Coils

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: oN <NOSPAM@EUNET.YU>
Message-ID: <8akpl7lvb1@SOLAIR2.EUnet.yu>
Source record: 62502

O, yes!
But, there is to many difficulties.
It can't work in Hertz waves.
You can't find QRM.
You need gooooood equipment to adjust it.
Everybody looks at you like you are weirdest person on all the planet.
...
YZ7RVZ
RadioCom <daveaa1a@xensei.com> wrote in message
scq9cloga5n112@corp.supernews.com...
>Am thinking Tesla coils make for good efficient antennas as well.
>
>Now driving 400 hz sq, wave to Audio Amp and keying 400volt DC
>
>into automotive spark coil, thence to the High Q tuned circuit
>
>for megga spark at about 500 khz.
>
>Anyone doing this sort of thing here?
>
>73s from Dave Riley - AA1A - www.radiocom.net
>
>
>

1997. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8alber$jr3$1@nnrp1.deja.com>
Source record: 62503
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8cm1lv.fr7.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> fly for religion, but here you need to provide some evidence
> of this "energy sucking". According to your assertion of a
> "grab" over 1000 wavelengths away,

What? 1000 wavelengths???? WHAT THE HECK
ARE YOU TALKING ABOUT!!!!!

Jeeze, no wonder you're attacking "energy sucking." If
you think it's supposed to operate over distances of
1000 wavelengths, something seriously screwy is going
on here.

Maybe we should start over. Perhaps your news server
is dropping messages or something. I don't recall
whether you were here at the start of this thread,
so maybe you missed the original discussion.

Are you aware that this whole thread is about two papers
from physics journals? Have you read them? Do you
have access to a physics library?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

1998. how does it work ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: aguessy fidegnon <aguessyf@rc.bel.alcatel.be>
Message-ID: <38CE33ED.FA26AF2B@rc.bel.alcatel.be>
Source record: 62504
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

can anyone tell me how the is modulated (analog or digital) and
everything that is happening between the microphone and the antenna .

thanks

1999. Tube Tester Hickok 533/539

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: SPLVI <klm.splvi@wxs.nl>
Message-ID: <8alet0$4ichn$1@reader3.wxs.nl>
Source record: 62505

Hi All,

I'm looking for a Tube Tester that is able to test at least the following
tubes;
12AT7/6201, 6AH6, 6DC6 and 6CL6.

Would a Hickok 533, or 539 be able to test these tubes?
Since I like the Replace/Good indicator on the 533;-) I prefer the 533, but
I don't know if the 533 can test these tubes.

If not, What other tester would accept the tubes?

Thanks in advance.

Best regards, Francine.

2000. Re: DSP Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8alh9f$nuf@nnrp2.farm.idt.net>
Source record: 62506

Ron Murias <ron.murias@nospam.home.com> wrote in message
news:m3snxwj26i.fsf@murias.dhs.org...
>
> There is, however, a place you can go for more information. Steve
> Smith has an introductory text out, and he's posted the entire
> contents on the web:
>
> http://www.dspguide.com

You can also check out the following URL. The files are in postscript format
so you will need a reader to view them. The chapters in the book cover the
theory of DSP without getting real heavy into the Math.

http://www.engr.usask.ca/classes/EE/880/

--
Leland C. Scott
KC8LDO

2001. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38CE5086.5E9644D7@mmm.com>
Source record: 62507
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote:
>
> Before I go on about this, I'd like to know, have
> you read either of those physics papers?

kindly repost the references.

Opinions expressed herein are my own and may not represent those of my employer.

2002. 0-55 MHZ DDS VFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: jedc@turboweb.net.au
Message-ID: <38ce5733.8694861@news.turboweb.net.au>
Source record: 62508

If you're interested in a vfo that will cover 0-55 MHz in 1 Hz steps
, have a look at :-
http://mx5.xoom.com/vk2aec/

2003. wtb: your old batt-op pocket CALCULATOR!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: floetay@aol.com
Message-ID: <20000314111323.02599.00001564@ng-fk1.aol.com>
Source record: 62509

Here's what I'm looking for: handheld-type battery-operated calculators, mostly the LED-type calcs from the 1970s, the ones with the reddish, blackish screens, often with glowing red numbers, as opposed to those you see most often today, with their typically grayish LCD screens (except for HPs -- love em w/ any screen!). I'm looking for all makes, all models, as long as they are cosmetically clean -- see partial list below. (The only calcs I don't care for are those made by Texas Instruments.) Anyway, if you've got the old manuals, cases, chargers, so much the better. Just drop me an email (floetay@aol.com) and let me know what you have and the condition it's in, and we can go from there. Thanks!

Calcs I'm interested in include, but are not limitted to those made by: Hewlett Packard (all models, both LED and LCD), Adler, American, APF, Apollo, Aries, Aristo, Berkey, Brother, Busicom, Caltronic, Candle, Citizen, Colex, Columbia, Corvus, Craig, Crown, Dataking, Decimo, Dictaphone, Digicomp, Dixon, Edmund, Enterprex, Facit, General, GIC, Hanimex, Hermes, Iain Jones, Ibico, JC Penneys, Kingspoint, Litton, Logitech, MBO, MITS, Master, Melcor, Mintron, Monroe, Omron, Ordibel, Panasonic, Pico, Pye, Ragen, RBM, Regan, RFT, Ricoh, Royal, Samsung, Sanyo, Sears, Sinclair, Spectrum, Sperry, Summit, TKS, Toshiba, Universal Data, Verax, Victor.
Good golly -- can you believe there were once about 220 brand-names in all?

2004. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cst47.t9a.root@radioactivex.lebesque-al.net>
Source record: 62510
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

```
>
>Bilge wrote in message ...
>
>
>> You need only look at the qed lagrangian under the replacement
>> of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge
>> invariance.
>
>You have lost me. Does this mean that if a photon has a mass, the photon's
>fields will not conserve energy, depending on the reference frame between
>the photon and an observer?
>

Nothing but aesthetics (backed by the 11 decimal prediction of the electron's
magnetic moment) prevents the photon from having a mass. Energy and (almost)
everything else) is still conserved. The dirac lagrangian is:

\*Psi (i\gamma^{\mu} \partial_{\mu} + m) \Psi = 0.

\*Psi = conjugate

If an electron is to be free to reference things (like fields) from it's
perspective (gauge invariance) then you would argue that the phase of
a function (your choice of coordinates) doesnt alter any physical
result and the physics depends on quantities like |\Psi|^2. In other words,
replacing \Psi by exp(i\phi)\Psi doesnt change the physics. If
you do that above:

exp(i\phi) \*Psi(i\gamma^{\mu} \partial_{\mu}

+ m) exp(-i\phi) \Psi = 0.

you get (with the wavefunction being implicitly a function of the
coordinates of course, so I don't have to write \Psi(x), too.

exp(i\phi)\*Psi (i\gamma^{\mu} \partial_{\mu} exp(i\phi) \Psi
+ exp(-i\phi) m \Psi = 0.

and since, in this case \phi is constant, the derivative factors
out and you are left with the same equation you started with.
Well,this isn't very interesting because all it does is tell you
a global phase doesn't mean anything. We want each electron to
be able to choose it's phase independently and be able to use the
same equation to describe the world, or in other words, the phase
```

\phi is an arbitrary function of the position (x == (t,x,y,z) here)
\phi(x). In this case it does matter that you are taking a derivative.

\partial (exp(-i\phi(x)\Psi) =

i\Psi exp(i\phi(x)\partial \phi(x) + exp(i\phi)\partial \Psi

and the new lagrangian is (after again factoring out the multiplicative
factor \exp(i\phi) left in each term:

*Psi ((i\gamma^{\mu} \partial_{\mu} + m + i(\partial\phi(x)))\Psi = 0.

This is NOT gauge invariant as it sits because by changing phases,
you added a new term. The solution, is to include that into
a definition for a gauge invariant derivative, which allows the
derivative to transform as well. You introduce the vector
field A_{\mu} such that the new derivative D, transforms:

D_{u} = \partial_{\mu} - iqA_{\mu}

(And since I know the answer, I've put the charge q in
explicitly).

And A transforms as A -> A + (1/q) \partial (\phi)

You'll note the similarity between this and the classical
gauge transformation. The vector field A has a kinetic
energy associated with it and since maxwell's equationnns tell
to that you can add the term (properl normalized):

(1/4) F^{\mu\nu} F_{\mu\nu}

to the lagrangian. This is already invariant so it doesnt
need to be "fixed". However, if the field has a mass term,
the equation is no longer gauge invariant. This works out okay
because no one has detected a photon mass. You can get a
mass, but it requires a new particle - the higgs.

In GWS (the term used in the paper for weinberg salaam), they
were unitinting the weak and E&M interaction, but the W+/-
and Z are MASSIVE, not MASSLESS. I'm not going to even attempt
to do this in any detail, since a book would do a better job
with clearer nomenclature. However, the salient features are
that you get 4 massless fields from gauge invariance. From
there, you can obtain a lot of things corresponding to
different vacuums, but GWS deliberately chose the vacuum
to get a massless photon and conserve charge. I don't see it
as an accident or a result of neglect.

2005. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8alsv3$61g$1@uranium.btinternet.com>
Source record: 62511
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Science Hobbyist wrote..
> What? 1000 wavelengths???? WHAT THE HECK
> ARE YOU TALKING ABOUT!!!!!
>
> Jeeze, no wonder you're attacking "energy sucking." If
> you think it's supposed to operate over distances of
> 1000 wavelengths, something seriously screwy is going
> on here.
==========
It is a fact that the strength of the radiation field is independent
of the size of a small antenna measured in fractions of a wavelengths.
It depends only on the power input and on the antenna's power
efficiency.

"Reciprocity" reverses the argument for a receiving antenna - in a
field of given strength the maximum available power is independent of
the size of a small receiving antenna and depends only on (the same)
power efficiency. The theoretical antenna can be as small as you like
!

When discussing antenna properties it may simplify matters to think in
terms of ideal antennas which are, in themselves, lossless.. But be
prepared to accept some wierd consequences of field distortion unless
just a teeny bit of inefficiency is allowed.

Reg.

2006. Re: how does it work ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <G3vz4.5319$QF6.234516@news5.giganews.com>
Source record: 62512
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

I suggest you obtain and read some books on this complex subject. I recommend the ARRL Radio Amateur's Handbook for starters.

73, Bob K6DDX

2007. Need SO-239

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: John <mstr-jl@swbell.net>
Message-ID: <Lsvz4.3996$_3.54429@news.swbell.net>
Source record: 62513

Anyone know a good inexpensive supplier? I need about 50 of 'em.

I know everything is going up, but $2.50 / $3.00 each is f#$*#> robbery...

Thanks,

John

2008. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ct2di.t9a.root@radioactivex.lebesque-al.net>
Source record: 62514
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8cm1lv.fr7.root@radioactivex.lebesque-al.net>,
>davids@david15.dallas.nationwide.net wrote:
>
>> fly for religion, but here you need to provide some evidence
>> of this "energy sucking". According to your assertion of a
>> "grab" over 1000 wavelengths away,
>
> What? 1000 wavelengths???? WHAT THE HECK
> ARE YOU TALKING ABOUT!!!!!
>

I thought that came from you're comments. I'll have to find
the particular post. But it doesn't matter If it's 2 wavelengths,
you violate light travelling at the speed of light to
accomplish it:

source
/ your antenna
0 ---------x
\
\
\x
ray it supposedly captures

The ray it captures must obviouly not take the direct
path or else it isn't of any interest to your argument.
If both arrive at the antenna so as not to degrade
the bandwidth, the 2nd ray has to travel faster than
the first, since not only is the path longer, but the
antenna has to "reach out and grab" it, OR

It has to violate causality to know something will be there
before it is, OR

It has to violate causality because the source would have
to redirect something that may have been emitted already
(unless this "effect" also depends upon distance from
the point of emission),

> Jeeze, no wonder you're attacking "energy sucking." If
> you think it's supposed to operate over distances of
> 1000 wavelengths, something seriously screwy is going
> on here.
>

No. I was attacking it before that. Since I thought you said something to the effect of 1000 wavelengths, I used that number to show how rediculous it sounded in context. However, the context isnt required to validate that point.

> Are you aware that this whole thread is about two papers
> from physics journals? Have you read them? Do you
> have access to a physics library?
>

If you'll recall, I asked you to cite them. I cant believe they say the same thing you imply, though I'm sure you do. Are you also aware that even prl comes out weekly and is unlikely that every or even a substantial fraction of what is published there is intended to do anything but propose further investigation? You are claiming that something which, as you describe it, requires a rewrite of modern physics and the papers describing the effect has generated no interest? Have you checked to see if there exist responses? Or followups? Please cite them so I know exactly what the problem is supposed to be and if it's related to this thread in some way. Are you also aware that the objections I've posted are still objections regardless, since such an antenna isn't compatible with current E&M ig what you claim is true? I suspect it's more like misinterpretation. And just as a reminder, I am unlikely to consider anything at keelynet a physics article. I'll read it, but so far, they have a 100% bogusness quotient. I don't anticipate any improvement.

The same sorts of claims have been made for the cfa, but that theory, is totally wrong despite insistence by people in direct contact with the inventors and who won't address a single problem that I've pointed out with theory, and despite the fact that the thesis that contained it was accepted in partial fulfillment for a degree. If this happens to be related to the cfa, I'll state right here that it's wrong.

2009. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ct2np.t9a.root@radioactivex.lebesque-al.net>
Source record: 62515
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

> I doubt it though. This whole thread is starting to
> look like something from a debating contest, where the
> object is to win at any cost, and where all sorts of
> "debating tactics" become acceptable. If this is a
> science discussion, then attaining new insights is the
> goal, and "trying to win" is not.
>

I've presented objections which in the context of current
E&M theory are valid. You haven't cited the papers as I've
asked and you've not shown that anything I've said is
incorrect. It's up to you to provide some evidence that
either E&M is incorrect or I am incorrect, since I believe
I've shown that in the context of E&M as it's known ,
what you've claimed cannot be correct. The citation will
at least let me know if you misunderstood the article or
whether E&M is history or whether the article is wrong.

2010. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8am9n5$dn1$1@news.IAEhv.nl>
Source record: 62516
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote:
> ...
> a global phase doesn't mean anything. We want each electron to
> be able to choose it's phase independently [...]

But why would "we" want this?

> In GWS (the term used in the paper for weinberg salaam), they
> were unitinting the weak and E&M interaction, but the W+/-
> and Z are MASSIVE, not MASSLESS.

But usually the descriptions of this theory give no clear reason _why_
there is gauge invariance. Also Weinbergs own QTF vol. I (the chapter
about QED) and vol. II (the chapter about non-abelian gauge theories and
the one about the electroweak interaction) don't give a clear reason.

The reason you give above ("we want each electron to ...") would
indicate that it's just for our pleasure. But it is mysterious why
nature seems to have a preference for gauge theories.

-- Jos

2011. Re: 0-55 MHZ DDS VFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: CA <remove_sm6pxj@hotmail.com>
Message-ID: <Y2yz4.5061$_Z2.8919@nntpserver.swip.net>
Source record: 62517

And here's another one (0-6 MHz though)
http://home4.swipnet.se/~w-41522/minidds/minidds.html

2012. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8amegjdnv1@nnrp1.deja.com>
Source record: 62518
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38CE5086.5E9644D7@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:
> Science Hobbyist wrote:
> >
> > Before I go on about this, I'd like to know, have
> > you read either of those physics papers?
>
> kindly repost the references.

Right here, including a couple of diagrams which might
help to focus the discussion a bit:

http://www.amasci.com/tesla/nearfld1.html

When I get home tonight, I'll type in the abstracts and
maybe the first few paragraphs, so people can get a feel
for what these authors are talking about.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2013. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: THE MICHAEL <nowhere@kenowhere.com>
Message-ID: <sctist9qs2r77@corp.supernews.com>
Source record: 62519

Can you narrow it down a little?

Mark Zenier <mzenier@netcom.com> wrote in message
> There was a multimode detector project article in QST about 5 years ago
> that used an FM IF (NE604?) for FM and a NE602 for the AM using these
> techniques.
>
> Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State
resident
>

2014. F6KEH HAM RADIO RESOURCES RELAY WEBSITE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: f5lcy <f5lcy@wanadoo.fr>
Message-ID: <8amklr$m53$4@wanadoo.fr>
Source record: 62520

F6KEH RESOURCES RELAY SITE is updated and has been moved to :

http://f6keh.free.fr/index_r

2015. Linear amp with 833A tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: john <w4thqNOw4SPAM@msn.com.invalid>
Message-ID: <08fd8b0c.19aee058@usw-ex0105-038.remarq.com>
Source record: 62521

I think there was an 833A linear in the ARRL handbook in the
early '90's but my books are all packed up for a move or I would
check.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2016. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: Mike Silva <mjsilva@jps.net>
Message-ID: <38cf2e56_2@news.jps.net>
Source record: 62522

Willy Krogstad wrote in message ...
>Hi gang!
>
>I would like to build my own shortwave receiver using tubes to learn more
>about vacuum tubes.
>Can anybody point me to web sites with schematics and info? Or are there
>good books on the subject available? I am not a radio amateur, but I have
>heard about (never seen) magazines like QST - I believe some of them
contain
>building descriptions of various receivers?
>
>Any help to get me started.................
>
>
>Willy

Hi Willy,

It can be done -- don't let anybody tell you different! IMHO (and in the opinion of the ARRL throughout the tube era...) a regen is a very good first tube receiver project -- afterwards you can seek out receivers with more performance and features. Here are some links:

http://www.qsl.net/~n6ev/1957.html look at 1-tube (6U8) regen

http://www.algonet.se/~janax/myregen.htm

http://www.fix.net/~jparker/norcal/hamcom/regenlinks.htm

73,
Mike, KK6GM

2017. Re: 160m AM PLL Tx ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38cd60f9.14562154@news.online.no>
Source record: 62594

On Mon, 13 Mar 2000 11:46:05 -0800, Cortland Richmond
<Cortland.Richmond@usa.alcatel.com> wrote:

>He could always link couple a carbon mike to the antenna!
>

it's sort of antenna.modulation(??)
>Cortland
>(ka5s@saber.ent)
>
>Richard Hosking wrote:
>
>> On Fri, 10 Mar 2000 11:45:51 +0000, phil
>> <phil@invest.fsbusiness.co.uk> wrote:
>>
>> >I wonder if anyone can point me to any Internet sites describing a top
>> >band solid state pll AM tx.
>> >
>> >I have several pll designs but unsure of which type of modulator to go
>> >for.
>> >
>> >I'd like to keep things as simple as possible and try and find a way
>> >around the need for any modulation transformers.
>> >
>> >Any help appreciated.
>> >
>> >(((73)))
>> >
>> >Phil G4ZOW
>> Gday Phil
>>
>> A free running VFO should be stable enough for AM. Alternatively use a
>> 1834 KHz crystal - these were used in XT computers for ?video card
>>
>> If you want a high level mdulator you could use a switch mode FET as
>> the power amp (class D efficiency should be up around 90%) and a
>> switch mode power supply with the audio varying the duty cycle of the
>> PSU (pulse width modullation). You obviously need a filter after this
>> to get rid of the switch mode subcarrier (say around 100KHz)
>>
>> Another possible scheme I have seen uses logic inverters as an
>> oscillator with a cystal. Following the oscillator is an RC integrator
>> circuit which converts a square wave from the oscillator to a
>> triangle wave which is then DC summed with the audio signal. This
>> combination is applied to another logic inverter - the effect is again

>> to produce a PWM signal. Again this can be amplified in a class D
>> system, though I am not sure of the spectral purity.
>>
>> If you wanted to get really fancy you could use the new DDS chip from
>> Analog Devices (AD9853) which can be amplitude modulated with a
>> digital signal though this would be quite involved.
>>
>> I would be interested to know if anyone has actually done any of this
>>
>> Richard
>> http://www.iinet.net.au/~richardh/VK6BRO.htm
>>
>> zaprichardh@iinet.net.au
>> (remove the zap)
>

2018. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cvlpd.660.root@radioactivex.lebesque-al.net>
Source record: 62445
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>What if the fluid-like nature of the vacuum is not impressed by the fourier
>transform? I mean if it is nonlinear, perhaps another basis function could
>better describe it, especialy those available with wavelets? Aren't there
>windowing problems with the fourier transform to deal with when using it to
>describe a composite impulse?

Then the uncertainty principle isn't correct.

2019. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8aok5a$g5c$1@slb1.atl.mindspring.net>
Source record: 62446

In article <sctist9qs2r77@corp.supernews.com>,
THE MICHAEL <nowhere@kenowhere.com> wrote:
>
>Mark Zenier <mzenier@netcom.com> wrote in message
>> There was a multimode detector project article in QST about 5 years ago
>> that used an FM IF (NE604?) for FM and a NE602 for the AM using these
>> techniques.

>Can you narrow it down a little?

No, sorry, I wasn't a subscriber and all I saw of it was a photocopy
of the article that a friend who was going to build it had. I'd say in
the 1994-1996 era, though.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

2020. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Willy Krogstad <willy.krogstad@levanger.mail.telia.com>
Message-ID: <pOQz4.3534$F3.185914368@news.telia.no>
Source record: 62447

Thanks to everybody who replied! I have seen a lot of web-sites, and ordered
a ARRL handbook from 1951, so I have a LOT to do! :-))

Now comes the other main obstacle: to find free time for all this!

Regards, Willy

Willy Krogstad <willy.krogstad@levanger.mail.telia.com> skrev i en
news:iXPy4.3177$F3.185908224@news.telia.no...
> Hi gang!
>
> I would like to build my own shortwave receiver using tubes to learn more
> about vacuum tubes.
> Can anybody point me to web sites with schematics and info? Or are there
> good books on the subject available? I am not a radio amateur, but I have
> heard about (never seen) magazines like QST - I believe some of them
contain
> building descriptions of various receivers?
>
> Any help to get me started.................
>
>
> Willy
>
>

2021. Re: diode mixer questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Ed Schick <schick@##us.ibm.com>
Message-ID: <38cff1a0_2@news1.prserv.net>
Source record: 62448
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.basics

Your post doesn't include enough information to give
an exact answer. For example - you ask about input
and output impedance. You want to match both input
impedances. A) to the local oscillator (the point labeled mix
on your diagram) and B) to the IF (the point marked in on
your diagram). Then, you want to math the output impedance
(the point marked out on your diagram) to the impedance
of the next stage. The caps drawn in your circuit ar most likely
for DC blocking. No need to calculate the diode's impedance.
Typically, there would be more components between the local
oscillator and the input to the mixer. These would likely be an LC
filter designed to block frequencies bove about 2X the LO frequency.
The output of the mixer would also contain filters, tuned to pass
the desired frequency and block others.

A single diode mixer is a real poor choice these days. There
are cheap and effective doubly balanced mixers available from
various supply houses, if your main interest is in creating a working
transverter. But - if you are experimenting and want to learn
about mixers, then go for the single diode variety as a first
experiment. But you're gonna need a bunch of good test gear -
signal generator, frequency counter, spectrum analyzer, attenuators
etc. I would recommend hitting the books before that, unless you
are fortunate enough to have access to a lab. An hour of reading
can replace hundreds of hours in the lab. And - if you have
laboratory equipment - you can put into practice in the lab what
you see in the books.

You ask about the resistor/choke. Take a look at your circuit.
If there was no means of developing a voltage drop (across
the resistor or choke) the signal at the bottom of the diode
would be grounded (the diode would be connected to ground).
You would have no means to get output to the next stage.
There has to be some amplification after the output - that
is not shown.

With a doubly balanced mixer, the usual input/output
arrangement is via transformer. Typically, you
feed the LO to the center tap of primary of the input transformer,
and the IF to one of the outer legs of that transformer -
the remaining leg goes to ground. The output (secondary)
of that transformer feeds 4 diodes, arranged in a ring like
a bridge rectifier. The output from the ring feeds into
a second transformer - the output from that transformer

feeds the next stage. I could spend a long time typing
what you can find in books - and doubtless I'd make
mistakes, so I heartily recommend a trip to the library.
Look for the ARRL handbook - it will have some
information on mixers that could get you started.
Also, somewhere around here I've got a book that does
a pretty good job of discussing mixers at an entry level.
If I can find it, I'll copy the pages that cover the subject
and snail mail you the copy, if you would like. Let me
know by E-mail if you want it - remove the # from
my address to send E. Ed

Fred wrote:

> I am trying to learn how diode mixer circuits work, they are so simple, but
> I don't understand design issues about component values.
>
> First. I have seen usually seen what looks like the input and the mix being
> fed into a diode that is fed to ground through a resistor. How do you
> choose the cap value? Are they just coupling capacitors?
>
> What about impedance at RF levels? I will be in the 146mHz range and
> wondered about keeping a 50 ohm impedance to the output and do I need a high
> or 50 ohm impedance on the input? Does the diode have an impedance I should
> calculate?
>
> Also, I have seen the resistor replaced by a choke, what's going on with
> that? How do I determine the value of the resistor or choke necessary? And
> why on some circuits is the output cap not used, especially if the choke is
> in there instead of the resistor?
>
> Does it matter if the RF grounds are tied to the DC ground or do they have
> to be separate? I've seen it both ways. :(
>
> In the circuit below I have seen the two resistors as 1k - 2.2k and the caps
> 100pf - 470pf. Can anyone explain this circuit to me? Thanks.
>
> mix o------/\/\/\/\/------------------| |--------o in
> |
> |
> \/ diode
> |
> |---------------| |---------0 out
> |
> /
> \
> / resistor or choke
> \
> |
> -------
> ---

> -
>
> --
> Fred
> N4IXL
> ICQ:10254840
> http://members.aol.com/fdecker

2022. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8aot4rcma1@news.IAEhv.nl>
Source record: 62449
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag Bilge <root@radioactivex.lebesque-al.net> wrote:

> >I've heard the higgs mentioned before. Was it ever detected?
> >
> The higgs for this symmetry breaking has not been detected. One
> spectactular problem is that the higgs mechanism puts absolutely
> no constraint on the higgs. According to "those in the know",
> I think the upper limit from some general consistency requirements

Most recent upper limit on the mass of the "standard model" Higgs:

230 GeV (with 95 percent confidence level)

(from an article two or three weeks ago in Phys. Rev. Lett.)

This means we should be able to find it with detectors available
within the next few years. If it's not found, the "standard model"
of physics is wrong. We'll then have to find another theory.

-- Jos

2023. 2gxat mod anyone?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: "Matthew H. Fogle" <foglem@cybermesa.com>
Message-ID: <38CFFD88.BCF8B425@cybermesa.com>
Source record: 62450

Anyone know the complete Icom 2GXAT mod?

2024. Re: Actuator info, pse (Aerial tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D0055E.7806E87B@agilent.com>
Source record: 62451

Hi Jan-Martin,

That sounds like a common stepper motor. If you do a web search, you'll turn up all sorts of info on driving steppers. Not too long ago I posted a short "tutorial" about them under some heading about a flatbed plotter over in sci.electronics.design. It should be available from dejanews, at least. But there's tons of stuff out there. The very brief explanation: drive the two windings with a sequence of DC levels, like so:

step winding 1 winding 2
1 +24V 0
2 +24V +24V
3 0 +24V
4 -24V +24V
5 -24V 0V
6 -24V -24V
7 0V -24V
8 +24V -24V
(repeat at step 1... Reverse the order of the steps to turn the opposite direction.)
The maximum stepping rate depends on the inertia of the motor and its load, and on how quickly you can change current in a winding when you turn it on or off. If you use higher voltage, but current limited, you can increase speed; and if you accelerate and decelerate in a controlled fashion, you can get to higher speeds. The steps listed above would normally be called "half-steps" I believe, so once through that cycle would probably cause your motor to turn about 30 degrees. 12 cycles through it would give you one revolution of your motor shaft.

You can often use a phase-shift capacitor to drive steppers from an AC source...

Cheers,
Tom

J M Noeding wrote:
>
> got some actuators,
> 24V, 2 phase, 35 ohms, 7.5ï¿½/step
> hope to use it for remote antenna tuning, but shat sort of pulses is
> needed to drive it?
>
> 73 jan-martin
> LA8AK

2025. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <SFTz4.17690$84.596362@elnws01>
Source record: 62452
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...
>
>
> >What if the fluid-like nature of the vacuum is not impressed by the
fourier
> >transform? I mean if it is nonlinear, perhaps another basis function
could
> >better describe it, especialy those available with wavelets? Aren't there
> >windowing problems with the fourier transform to deal with when using it
to
> >describe a composite impulse?
>
> Then the uncertainty principle isn't correct.

Imagine that :-)
I'm not the only one that has, the Motion Mountain online physics book I refered to a few posts back describes the uncertainty principle as a result of 'baths' or statistical analysis of a non-statistical instance, which again goes back to wavelets vs fourier, and something about loosing scattering matrix diagonals.

No spooky wave-particle collapse, because wave particles are solitons that have a wavelength, position and velocity.

I know some people objecting that if you cover on slit of a double-slit interferometer up, then the particle or photon's path is altered. The particle must be a wave, to have traveled through both slits. But consider the following:

Particles and photons are electro-magnetic solitons that travel through a noisy medium (the vacuum or aether)
A photon is a soliton that must travel in space
A particle is a soliton that loops in a circle, constantly running around the same tiny area of space.

A double slit interferometer is made of soliton-particles that are in a bath of noisy vacuum-foam.
When a photon travels through a slit, the slit functions as an antenna.
The photon is absorbed and re-radiated by the slit, and in the process of re-radiation, gets mixed with the vacuum noise.
The vacuum noise bandwidth or frequency components are dependant on the geometry of the interferometer (think of the Casimir effect & virtual photons).
Particles move because they are distorted, they distort the field around them and the distorted field has a wavelength that ends up functioning just

as a photons wavelength.
Likewise spooky tunneling and entanglement have meaning in terms of finite, non-pointlike particles that can deform, store energy and vibrate, and interact with the noisy nonlinear fluid they travel through.

Now you still have a vacuum with virtual photons, (which I see as noise) and you still do a sum-of-all-paths or path integral, but now there is meaning to it all, a mechanical basis that is understandable to crude minds like mine that get neurotic over wave-particle spookyness ;-)

Scott

.

2026. Subject: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000315083359.009fecc0@pop.uky.edu>
Source record: 62453

Ok, now that you have discussed the receiving properties of atoms how about transmitting properties. If an atom emits some sort of radiation what would be the direction, and is it in the form of photons or EM waves?

73
Bill wa4lav

2027. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D008C9.9A451535@agilent.com>
Source record: 62454
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

It seems to me what you've discovered there is simply an example of
conjugate matching. If you "look back into" the little capacitor in the
field, you will "see" some source impedance. In a linear,
time-invariant system, I expect to maximize the power dissipated in the
load by making the load impedance equal to the complex conjugate of the
source impedance. If you come up with something different from that,
um, I might quit yawning... Sorry, but so far, I don't see anything new
here. As soon as you agree that the system is linear and time-invariant
(over the time span of our experiment, nominally), then it's going to
take a demonstrable deviation from what's predicted by linear circuit
theory to get me excited.

Cheers,
Tom

William Beaty wrote:
>
> [Article crossposted from sci.physics.electromag]
> [Author was Science Hobbyist]
> [Posted on Wed, 15 Mar 2000 01:49:31 GMT]
>
> I've put together a little website about the simple ideas
> which underlie the "energy sucking" concept. These DO
> NOT involve EM travelling waves and distant transmitters,
> but instead focus only upon simple circuits. If we
> can't come to agreement about this simple circuit, then
> there's no point in arguing about "energy sucking"
> antennas and waves in space.
>
> Simple capacitive "antennas"
> http://www.amasci.com/tesla/nearfld1.html
>
> On the other hand, if the above circuit proves to have
> a fundamental flaw, then "energy sucking antennas"
> probably has the same flaw. The clearer I can make
> the ideas, the more robust they become, but also the
> easier it is to find any big holes.
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>

> Sent via Deja.com http://www.deja.com/
> Before you buy.
> --
> (((((((((((((((((((((((((O)))))))))))))))))))))))))
> William J. Beaty SCIENCE HOBBYIST website
> billb@eskimo.com http://www.amasci.com
> EE/programmer/sci-exhibits science projects, tesla, weird science

2028. DISH LNBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <vXTz4.503$oc.15036@news5.giganews.com>
Source record: 62455

Has anyone characterized a DISH network LN B to see if it will receive in the 10 GHz hamband?

73 de Jack

2029. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d03gg.68i.root@radioactivex.lebesque-al.net>
Source record: 62456
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>This means we should be able to find it with detectors available
>within the next few years. If it's not found, the "standard model"
>of physics is wrong. We'll then have to find another theory.

Ever notice the tendency for any prediction usually places the
ability to obtain verification just a shade over the edge of being
able to accomplish the task with existing equipment? If the
standard model is wrong, it will be really difficult to explain
why it works so well. I haven't looked recently, but if the higgs
isnt found where it's supposed to be, I suspect there will be
new reasons for not seeing it in the context of the standard model
before dumping it.

2030. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38cff069.182379724@news.online.no>
Source record: 62457

On Wed, 15 Mar 2000 18:40:21 GMT, "Willy Krogstad"
<willy.krogstad@levanger.mail.telia.com> wrote:

>Thanks to everybody who replied! I have seen a lot of web-sites, and ordered
>a ARRL handbook from 1951, so I have a LOT to do! :-))
>
>Now comes the other main obstacle: to find free time for all this!
>
>
>Regards, Willy
>
>
it is an fb rx "An Amateur-Band Eight-Tube Superheterodyne on page 119
in 1948 handbook, you'll find the tubes at www.nrhf.no , but I would
rather use ECH35 as LO/mixer and EBF32 as 2nd IF and detector and 6SN7
as BFO and audio amp
My first RX is described in Amat�r radio (62?), was 0V1 using 2x EF42
or EF41/6CJ5

>Willy Krogstad <willy.krogstad@levanger.mail.telia.com> skrev i en
>news:iXPy4.3177$F3.185908224@news.telia.no...
>> Hi gang!
>>
>> I would like to build my own shortwave receiver using tubes to learn more
>> about vacuum tubes.
>> Can anybody point me to web sites with schematics and info? Or are there
>> good books on the subject available? I am not a radio amateur, but I have
>> heard about (never seen) magazines like QST - I believe some of them
>contain
>> building descriptions of various receivers?
>>
>> Any help to get me started.................
>>
>>
>> Willy
>>
>>
>
>

2031. Back issues of QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d0184c.192592082@news.online.no>
Source record: 62458

I am not a member of ARRL, but receive old issues from a club, is it some way I could find index for my old QST's in the period 1980-1996

73 jan-martin
LA8AK

2032. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Jos Bergervoet <bergervo@iaehv.iae.nl>
Message-ID: <8ap6e6$3nl$2@news.IAEhv.nl>
Source record: 62459
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In sci.physics.electromag Bilge <root@radioactivex.lebesque-al.net> wrote:

> Ever notice the tendency for any prediction usually places the
> ability to obtain verification just a shade over the edge of being
> able to accomplish the task with existing equipment? If the

Fortunately, the verification that everything consists of Planck-scale
superstrings will require somewhat more than existing equipment.

-- jos

2033. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1503002331280001@dialup-264.hip.cam.org>
Source record: 62460

In article <8aok5a$g5c$1@slb1.atl.mindspring.net>, mzenier@netcom.com
(Mark Zenier) wrote:

> In article <sctist9qs2r77@corp.supernews.com>,
> THE MICHAEL <nowhere@kenowhere.com> wrote:
> >
> >Mark Zenier <mzenier@netcom.com> wrote in message
> >> There was a multimode detector project article in QST about 5 years ago
> >> that used an FM IF (NE604?) for FM and a NE602 for the AM using these
> >> techniques.
>
> >Can you narrow it down a little?
>
> No, sorry, I wasn't a subscriber and all I saw of it was a photocopy
> of the article that a friend who was going to build it had. I'd say in
> the 1994-1996 era, though.
>
I knew about the article before you mentioned it, but I had to dig it out
to get the date. If only magazines would put their cumulative indexes
online, it would make things so much easier for those of us who remember
articles, but never bothered to memorize the issue. The ARRL actually
puts QST's index online, or so I gather, but it's in their members only
section which doesn't help the rest of us.

Anyway, it was QST for July 1993 that had the article, "A Synchronous
Detector for AM Transmissions" by Jukka Vermasvuori of Finland.

(Or maybe it's not the same article? Because it does not detect
FM; this one is strictly for AM.)

And the article was reprinted in some editions of the ARRL Handbook,
but I can't say for how many years or if it's still in the latest issue.

It has both a synchronous detector, with a PLL that locks to the incoming
carrier, and a "quasi-synchronous detector" of the type we are talking
about here.

What's interesting to this discussion is that it uses NE602s for
the actual product detectors. The NE604 provides the limiter for
the 602 used as a quasi-synchronous detector, while the actual
quadrature detector in the 604 normally used for FM detection is
used as a phase detector. The oscillator in the 602 used for
synchronous detection is used for the VCO that locks to the incoming
signal.

Michael VE2BVW

2034. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8amkb0$i56$1@nnrp1.deja.com>
Source record: 62523
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <slrn8ct2di.t9a.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> bbeaty wrote:
> > What? 1000 wavelengths???? WHAT THE HECK
> > ARE YOU TALKING ABOUT!!!!!
>
> I thought that came from you're comments.

No. I vaguely remember talking about a DISTANT
transmitting antenna which was sending waves to the
receiver in question, and in order to make clear what
"distant" should mean, I said "thousands of wavelengths."

"Energy sucking" does not interact with transmitters
which are thousands of wavelengths distant. It only
"reaches out" within the (fuzzy) boundaries of the
large nearfield region surrounding a very short
antenna.

> I'll have to find
> the particular post. But it doesn't matter If it's 2
> wavelengths, you violate light travelling at the speed of
> light to accomplish it:

Obviously.

What was apparantly missed in the long exchange was the fact
that the XXXXX effect (sucking? cancelling? whatever.) takes
place entirely in the nearfield region of the receiving
antenna. I made this clear early on, but that was many
days ago, back before the thread started getting
emotional.

> > Are you aware that this whole thread is about two papers
> > from physics journals? Have you read them? Do you
> > have access to a physics library?
>
> If you'll recall, I asked you to cite them.

People keep asking, and I've kept posting the citations, so
maybe dejanews is losing messages.

H. Paul and R. Fischer "Light Absorbtion by a dipole",
SOV. PHYS. USP., 26(10) Oct. 1983 pp 923-926

C. F. Bohren, "How can a particle absorb more than the light
incident on it?", Am J Phys, 51 #4, pp323 Apr 1983

Tonight I'll type in the abstracts.

Last night I drew some diagrams of a related phenomenon in
an attempt to rebut some of the objections people have
made. If this circuit-effect is wrong, then "energy
sucking" is wrong:

http://www.amasci.com/tesla/nearfld1.html

But if the above effect is real, then several of the
arguments against "energy sucking" are exposed as
incorrect.

> I cant believe
> they say the same thing you imply, though I'm sure you
> do. Are you also aware that even prl comes out weekly
> and is unlikely that every or even a substantial fraction
> of what is published there is intended to do anything
> but propose further investigation?

Certainly. I've heard it said that only half the papers
in the top journals are wrong. :) I don't claim that
these papers are right because they are in physics journals,
I only claim that the basic ideas didn't come from a
PURE crackpot source, myself. Instead I got them from a
slightly more reputable place.

> You are claiming that
> something which, as you describe it, requires a rewrite
> of modern physics and the papers describing the effect
> has generated no interest?

I think it has generated no interest because it requires no
such rewrite. It is just a new interpretation
of known EM phenomena. In antenna theory, it's apparently
contained within the "effective area" concept pertaining
to short antennas. It's best application is in explaining
how small bits of matter can strongly interact with EM
radiation, even when the physical dimensions of the bits
of matter are *far* smaller than one wavelength at the
frequency in question.

> Have you checked to see if there exist responses? Or
> followups?

No. It didn't occur to me. I shall do so. I'd like
to see them myself.

> And just as a reminder, I am unlikely
> to consider anything at keelynet a physics article.

Nope, this has nothing to do with Keelynet. The only
"fringe" component is this:

N. Tesla claimed to be able to light a bank of light bulbs
tens of KM from his transmitter. It is commonly argued
that such a thing is impossible, since an enormous array
of receiving antennas would be needed. However, if
the "effective area" of electrically short antennas can be
greatly increased by adding a resonator, and if Tesla was
using wavelengths where the nearfield region was physically
very large, then maybe a fairly small receiving tower or
a balloon-bourn vertical wire could have accomplished the
trick.

> The same sorts of claims have been made for the cfa,
> but that theory, is totally wrong despite insistence by
> people in direct contact with the inventors and who won't
> address a single problem that I've pointed out with theory,
> and despite the fact that the thesis that contained it was
> accepted in partial fulfillment for a degree. If this happens
> to be related to the cfa, I'll state right here that it's
> wrong.

Not related to the CFA. However, in learning about
"energy sucking", I realized that the CFA stuff is
misguided. If electrically short antennas can serve as
efficient transmitters through use of appropriate
matching networks, then we don't need any "crossed
fields" to explain why a relatively small metal cylinder
can behave like an immense AM radio tower.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

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2035. Re: Need SO-239

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: n1bug@mint.net
Message-ID: <38cee9f0.35819393@news.mint.net>
Source record: 62524

Depends on what quality you want. The RF Connection
(http://www.therfc.com) has them from $1 and up.

Paul

"John" <mstr-jl@swbell.net> wrote:

>Anyone know a good inexpensive supplier? I need about 50 of 'em.
>
>I know everything is going up, but $2.50 / $3.00 each is f#$*#> robbery...
>
>Thanks,
>
>John
>
>
>
>

2036. 80 meter loop

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: bujiaj8@aol.com
Message-ID: <20000314205111.02476.00002321@ng-ca1.aol.com>
Source record: 62525

I want to build a 80 meter loop... so ... does anyone know of good websites for information on loop antennas.?/ pls email

bill

2037. 30 MHZ Low Pass Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <VeEz4.142$gf4.4950574@news2.news.adelphia.net>
Source record: 62526
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

This is a Networks International Corporation hermetically sealed commercial quality 30 mHz low pass filter. Both input and output connections are 50 ohms BNC. The second picture shows the filter roll-off above 30 mHz. Each horizontal line represents 10 dB of attenuation. This is a great filter to keep unwanted rf out of your shortwave receiver front end.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=280311865

2038. Vernier Knob with Planetary Gear Reduction

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <fgEz4.143$gf4.4954595@news2.news.adelphia.net>
Source record: 62527

This knob has a scale of 0-100 and a 10 to 1 gear reduction. It takes 5 turns of the knob to produce 1/2 turn of the output shaft and dial indicator. It connects to a 1/4 inch diameter shaft. It is NOS (new old stock) and excellent condition.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=280318520

2039. Re: wtb: your old batt-op pocket CALCULATOR!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Udo Peters <dk3bi@t-online.de>
Message-ID: <38CF2879.E7EDD83E@t-online.de>
Source record: 62528

Floetay wrote:
>
> Here's what I'm looking for: handheld-type battery-operated calculators,
> mostly the LED-type calcs from the 1970s, the ones with the reddish, blackish
> screens, often with glowing red numbers, as opposed to those you see most often
> today, with their typically grayish LCD screens (except for HPs -- love em w/
> any screen!). I'm looking for all makes, all models, as long as they are
> cosmetically clean -- see partial list below. (The only calcs I don't care for
> are those made by Texas Instruments.) Anyway, if you've got the old manuals,
> cases, chargers, so much the better. Just drop me an email (floetay@aol.com)
> and let me know what you have and the condition it's in, and we can go from
> there. Thanks!
>
> Calcs I'm interested in include, but are not limitted to those made by: Hewlett
> Packard (all models, both LED and LCD), Adler, American, APF, Apollo, Aries,
> Aristo, Berkey, Brother, Busicom, Caltronic, Candle, Citizen, Colex, Columbia,
> Corvus, Craig, Crown, Dataking, Decimo, Dictaphone, Digicomp, Dixon, Edmund,
> Enterprex, Facit, General, GIC, Hanimex, Hermes, Iain Jones, Ibico, JC Penneys,
> Kingspoint, Litton, Logitech, MBO, MITS, Master, Melcor, Mintron, Monroe,
> Omron, Ordibel, Panasonic, Pico, Pye, Ragen, RBM, Regan, RFT, Ricoh, Royal,
> Samsung, Sanyo, Sears, Sinclair, Spectrum, Sperry, Summit, TKS, Toshiba,
> Universal Data, Verax, Victor.
> Good golly -- can you believe there were once about 220 brand-names in all?

Hello Floetay,
I have a calculator mady by Canon in 1970. The type is Palmtronic LE-10.
The built in battery is defective but it still works when attached to
the power supply / charger.
It is in pretty good shape. Are you interested?

73's from Udo dk3bi

2040. microwave oven transformer tips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <LvGz4.3500$511.994803@tw11.nn.bcandid.com>
Source record: 62529

In case you are thinking about it, and haven't read the many articles, here is what i found (in a nut shell).

As they come off the shelf, they have a secondary voltage of about 2700 vac. They will draw about 10 amps unloaded! Here is what to do about it. Locate the magnetic shunts (blocks or plates of silicon steel) between the primary and secondary. Use a drift to knock them out. The tranny will now behave more normally, but for most folks you will want to remove some of the wire on the secondary, as the output voltage will be far to high for most uses. I am running an 8930 at 600 watts input, and 400 watts output, and my tranny barely even gets warm.
73 Gummi

2041. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <ZLHz4.17634$84.593094@elnws01>
Source record: 62530
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge<ROOT@RADIOACTIVEX.LEBESQUE-AL.NET wrote in message ...

> >Bilge wrote in message ...
> >
> >> You need only look at the qed lagrangian under the replacement
> >> of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge
> >> invariance.

> The dirac lagrangian is:

> *Psi (i\gamma^{\mu} \partial_{\mu} + m) \Psi = 0.
> *Psi = conjugate

Can you explain this? I understand the lagrangian is a function describing the stored vs kinetic energy? Psi is the phase? What is i and mu?

> If an electron is to be free to reference things (like fields) from it's
> perspective (gauge invariance) then you would argue that the phase of
> a function (your choice of coordinates) doesn't alter any physical
> result and the physics depends on quantities like |\Psi|^2.

That makes sense, the absolute value |/Psi|^2 is the amplitude or energy of the particle?

> In other words,
> replacing \Psi by exp(i\phi)\Psi doesn't change the physics. If
> you do that above:

What is exp(i\phi)\Psi ? Is this the complex (exponential) expression of a sinusoid?

> We want each electron to
> be able to choose it's phase independently and be able to use the
> same equation to describe the world,

The meaning of gauge invariance?

> And A transforms as A -> A + (1/q) \partial (\phi)
>
> You'll note the similarity between this and the classical
> gauge transformation.

If I knew the classical gauge transformation, something like the Lorentz?

> This works out okay
> because no one has detected a photon mass. You can get a
> mass, but it requires a new particle - the higgs.

Maybe this could be because its conserved during emission and absorption?
I've heard the higgs mentioned before. Was it ever detected?

I have this silly notion that the magnetic vector potential is a
longitudinal force, the compression of a string mass along the time axis,
and the electric scalar potential is the instantaneous density of mass-time.
Mass-time is equivalent to charge. This combination of 1d longitudinal waves
with 3d transverse waves leads to soliton-photons. In which case mass is a
bit of charge density that travels along with, trapping energy and
stabilizing the soliton.

If photons have mass it would seem that it could be detected similar to the
way acoustic radiation pressure is detected, the B(3) magnetic field is
similar to the air/fluid stream that is created by sound?

> In GWS (the term used in the paper for weinberg salaam), they
> were unitinting the weak and E&M interaction, but the W+/-
> and Z are MASSIVE, not MASSLESS. I'm not going to even attempt
> to do this in any detail, since a book would do a better job

And I'm afraid its a waste to throw a lot of equations at me I don't get. A
lot of engineers and technicians at my level look for understanding of
relationship. Of course equations convey these, but all to often I find the
equation forms too obscure to understand unless I get a lot of exposure. I
was relieved to read that 90% of physicists only understand 10% of what
their colleagues write!

> However, the salient features are
> that you get 4 massless fields from gauge invariance.

The fields are the EM vector and scalar potentials, and the potentials
carried by the W and Z?

Thanks for your patience!

Scott

2042. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cumfk.t9a.root@radioactivex.lebesque-al.net>
Source record: 62531
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>In article <slrn8ct2di.t9a.root@radioactivex.lebesque-al.net>,

>
> I think it has generated no interest because it requires no
> such rewrite. It is just a new interpretation
> of known EM phenomena. In antenna theory, it's apparently
> contained within the "effective area" concept pertaining
> to short antennas. It's best application is in explaining

The last item that I recall that "didn't need a rewrite" and
would have produced less controversy if true, was the cold
fusion fiasco. Despite the fact that not a single person I
knew gave it a hope (though one of those persons got a _lot_
of equipment for letting an experiment sit unattended for
a real long time since no data ever showed up), companies
were willing to simply throw away a million here a million
there on the infinitessimal possibility they would get
some of the rights to something they had nothing to
do with. In that context, I would have expected an effect
that has more severe consequences to spark a bit more
interest.

> how small bits of matter can strongly interact with EM
> radiation, even when the physical dimensions of the bits
> of matter are *far* smaller than one wavelength at the
> frequency in question.

The wavelength applied to a photon is nothing but an
artifact of it's probability distributionn. The E&M
interaction between a photon and a charge is not
spread out. It makes zero difference what the wavelength
is - that wavelength is NOT the size of the photon
it's the size of the space surrounding a point
some distance away from the source where the photon
is most likely to be found. It may be useful to picture
a photon as being that size, because a cross section
is also a statistical process and has units of area,
but attaching a physical size to a photon is totally
unphysical. Read what I posted to someone that asked.
If the photon has a size, then the photon has to
retain the geometry as it moves and hence has
a finite spacial extent from its own viewpoint.
BUT, the photon has no restframe (viewpoint) because
it moves at c. Any size would be contracted to 0

if you try to endow it with one. What is the separation
distance of two points that move past you at c?

> very large, then maybe a fairly small receiving tower or
> a balloon-bourn vertical wire could have accomplished the
> trick.
>

Since I am not familiar with the particulars of the claim,
I really cant say much about the likelyhood of whether there
is merit to the claim or whether the antenna has any bearing
on it.

> fields" to explain why a relatively small metal cylinder
> can behave like an immense AM radio tower.
>

What's misguided is the concept of the crossed-field. Every
time I think of that concept, I come up with another physical
law that it violates - and considering how many that is,
it amazes me the concept got past the ee department in whatever
uniiversity it was and is still being used to promote it the
antenna with a straignt face. (I have no data on whether it
works well or not, but it doesn't work in the way the propaganda
sheets want people to fall for). I suspect that, if the people
that invented it actually understand what they're saying, then
they've probably maintained their insistance because the
patent ($$$) depends on it.

2043. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cunpm.t9a.root@radioactivex.lebesque-al.net>
Source record: 62532
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>
>The reason you give above ("we want each electron to ...") would
>indicate that it's just for our pleasure. But it is mysterious why
>nature seems to have a preference for gauge theories.
>

Well, at some point, it will be impossible to know just how one
or several conditions were chosen by nature. (At least I'm hard pressed
to belive that at least one parameter is free and that the best explanation
is that any other value but the measured or calculated value soesn't work).

So, what is the most general and reasonable restrictions you can
put on natural phenomena? In my opinion, it's the statement from
one of the postulates of special relativity that laws of phyisics
are the same in every inertial frame. Once you have that, which is
really pretty liberal as far imposing a personal view on what is
aesthetic, then gauge invariance follows from noether's theorem. The
fact that qed works better than any other theory ever to grace the
world, leads me to belive there is some merit to thinking in terms
of symmetries for all physical laws. Sure. None of HAS to be correct,
but much as some people would like to believe otherwise, aesthetics
probably has more to do with the theoretical insight of every great
physical theory than anything else. Intuition is nothing more than
having a good sense of aesthetics. Nature has a preference for gauge
theories because they avoid specifying preferences at all. Even when
the symmetry is broken, it's only hidden. (yes, that sounds cliche,
but I couldn't think of a more original way to state it).

2044. Re: microwave oven transformer tips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38CF669F.F1F47879@webaxs.net>
Source record: 62533

Removing the shunt will mean the secondary can supply current with
less droop, but i doubt it will reduce the unloaded primary magnetizing
current.

gudmundur wrote:
>
> In case you are thinking about it, and haven't read the many
> articles, here is what i found (in a nut shell).
>
> As they come off the shelf, they have a secondary voltage of about
> 2700 vac. They will draw about 10 amps unloaded! Here is what to do
> about it. Locate the magnetic shunts (blocks or plates of silicon
> steel) between the primary and secondary. Use a drift to knock them
> out. The tranny will now behave more normally, but for most folks
> you will want to remove some of the wire on the secondary, as the
> output voltage will be far to high for most uses. I am running an 8930
> at 600 watts input, and 400 watts output, and my tranny barely even
> gets warm.
> 73 Gummi

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2045. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Jos R Bergervoet <Jos.Bergervoet@philips.com>
Message-ID: <38CF5F7D.1C3E@philips.com>
Source record: 62534
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Jos Bergervoet wrote:
>
> Bilge wrote:
>> ...
>> a global phase doesn't mean anything. We want each electron to
>> be able to choose it's phase independently [...]
>
> But why would "we" want this?
>
>> In GWS (the term used in the paper for weinberg salaam), they
>> were unitinting the weak and E&M interaction, but the W+/-
>
> But usually the descriptions of this theory give no clear reason _why_
> there is gauge invariance. Also Weinbergs own QTF vol. I (the chapter
> about QED) and vol. II (the chapter about non-abelian gauge [...]

To be honest, Weinberg does discuss this in the introduction to
chapter 8, and one argument he gives (speculative as it may be)
is that it would follow from superstring theory.

Of course, there is momentarily no evidence that superstring
theory is correct.

-- Jos

2046. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8cuqod.t9a.root@radioactivex.lebesque-al.net>
Source record: 62535
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

>Bilge<ROOT@RADIOACTIVEX.LEBESQUE-AL.NET wrote in message ...
>
>> >Bilge wrote in message ...
>> >
>> >> You need only look at the qed lagrangian under the replacement
>> >> of \Psi -> exp(i\phi) \Psi to see that a photon mass breaks the gauge
>> >> invariance.
>
>> The dirac lagrangian is:
>
>> *Psi (i\gamma^{\mu} \partial_{\mu} + m) \Psi = 0.
>> *Psi = conjugate
>
>Can you explain this? I understand the lagrangian is a function describing
>the stored vs kinetic energy? Psi is the phase? What is i and mu?
>

\Psi is the electron (or any other charged fermion). \mu (and \nu)
are indices over the coordinates t,x,y,z so they run from 0 - 3.
x0 <-> t, x1 <-> x, x2 <-> y, x3 <-> z., i is the usual -1^{1/2}

The \gamma matrices are the matrices you get from the dirac equation
that are usually represented by taking the three \alpha matrices and
the \beta matrix:
- - - -
\alpha = | 0 \sigma | \beta = | I 0 |
| \sigma 0 | | 0 -I |
- - - _

\sigma = pauli matrices, I = 2x2 identity,
0 = zero where nothing else is.

and multiplying them out \gamma^{\mu} = (\beta, \beta\alpha) so that the
dirac equation appears in covariant form. (and all of that comes from
solving E = p + m, with the quantum mechanical substitutions for E,p)

>That makes sense, the absolute value |/Psi|^2 is the amplitude or energy of
>the particle?
>
No. It's the usual probability flux. You need to obtain a physical property
from an observable: <\Psi|eE\vec(r)|Psi>, for example.

>What is exp(i\phi)\Psi ? Is this the complex (exponential) expression of a
>sinusoid?
>

\phi is a phase angle. Multplying the wave function by a phase angle is no different than letting:

sin(X) -> sin(x + \phi(x)) where in this case the angle depends upon x rather than a constant.

>The meaning of gauge invariance?
>
It's synoymous with phase invariance. It's like spherical symmetry in geometry, all points are equivalent, so rotating a sphere throught any angle cant change anything.

>I've heard the higgs mentioned before. Was it ever detected?
>
The higgs for this symmetry breaking has not been detected. One spectactular problem is that the higgs mechanism puts absolutely no constraint on the higgs. According to "those in the know", I think the upper limit from some general consistency requirements puts it somewhat above the t-quark. The theory also doesnt forbid it from being a composite particle. In superconductors, the higgs is the cooper pair.

>with 3d transverse waves leads to soliton-photons. In which case mass is a
>bit of charge density that travels along with, trapping energy and
>stabilizing the soliton.
>
The problem with it being a soliton is that the soliton is the wrong way to optimize a wavepacket to give minimum uncertainties in the fourier tranform pairs, like \Delta p \Delta x . The optimal wavepacket is a gaussian.

>If photons have mass it would seem that it could be detected similar to the
>way acoustic radiation pressure is detected, the B(3) magnetic field is
>similar to the air/fluid stream that is created by sound?
>
Since the limit that previously posted for the photon mass was < 10^-46 gm, it's unlikely it will be measure directly. There is a discussion of such measurements in the 1st chapter of Jackson, 2ed.

>was relieved to read that 90% of physicists only understand 10% of what
>their colleagues write!
>
But you asked. I tried to avoid it, but at some point, you either have to believe the answer or work throught the grundgy details yourself. You didn't want to just buy the result, so you got some details to start with.

>> However, the salient features are
>> that you get 4 massless fields from gauge invariance.
>
>The fields are the EM vector and scalar potentials, and the potentials
>carried by the W and Z?
>

The fields are the photon which carries the E&M interaction, and the
W++/- and Z which mediate the weak nuclear force that casues beta decay.
The theory predicts a lot more than the massless photon. The symmetry
in the W+/- and Z has (well verified) consequences in beta decay.

2047. Looking for Sierra QRP kit review.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <8anrtnmrj1@news5.svr.pol.co.uk>
Source record: 62536

I'm hoping someone out there can help me with a scan or photocopy of an article on the Wilderness Radio multiband CW QRP kit called the 'Sierra', which apparently has appeared in the last 3 editions of the ARRL Handbook and also in June 1996 QST magazine. Please reply direct to my address below and I will obviously reimburse any costs involved.

Many thanks in advance.

John.

john@mm1dsp.freeserve.co.uk

2048. Re: 80 meter loop

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38CFACF0.88035BC5@home.com>
Source record: 62537

try asking on "rec.radio.amateur.antenna"

BUJIAJ8 wrote:

> I want to build a 80 meter loop... so ... does anyone know of good websites for
> information on loop antennas.?/ pls email
>
> bill

2049. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: "Bill Turner, W7TI" <w7ti@jps.net>
Message-ID: <224vcs0cif35vrrii4gvh7d0uhp8uahm50@4ax.com>
Source record: 62538

"Mike Silva" <mjsilva@jps.net> wrote:

>
>Willy Krogstad wrote in message ...
>>Hi gang!
>>
>>I would like to build my own shortwave receiver using tubes to learn more
>>about vacuum tubes.
>>Can anybody point me to web sites with schematics and info? Or are there
>>good books on the subject available? I am not a radio amateur, but I have
>>heard about (never seen) magazines like QST - I believe some of them
>contain
>>building descriptions of various receivers?
>>
>>Any help to get me started.................
>>
>>
>>Willy

Check out any of the ARRL handbooks prior to about 1965 or so. For a radio hobbyist (as opposed to a professional engineer) they are probably your best source of tube design information. There are usually several available on eBay.

Bill, W7TI

2050. Re: How to make my own tube SW receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Tom Turnbull <Tom.Turnbull@durham.ac.uk>
Message-ID: <8ao7tj$i8p$1@sirius.dur.ac.uk>
Source record: 62539

Bill Turner, W7TI <w7ti@jps.net> wrote in message
news:224vcs0cif35vrrii4gvh7d0uhp8uahm50@4ax.com...
>
> >
> >Willy Krogstad wrote in message ...
> >>Hi gang!
> >>
> >>I would like to build my own shortwave receiver using tubes to learn
more
> >>about vacuum tubes.

Try

http://sm0vpo.8m.com/rx/regen2.htm
and others at
http://sm0vpo.8m.com/
also check out the links at
http://www.webring.org/cgi-bin/webring?ring=ba;id=8;list

One day when I have a little more time I would like to do the same thing
myself.

Good luck.

Tom.

2051. Re: microwave oven transformer tips

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <aBNz4.3815$511.1144676@tw11.nn.bcandid.com>
Source record: 62540

In article <38CF669F.F1F47879@webaxs.net>, russell@webaxs.net says...
>
>Removing the shunt will mean the secondary can supply current with
>less droop, but i doubt it will reduce the unloaded primary magnetizing
>current.
>

Apparently, with the shunts in place, the primary is operating with
a nearly saturated core, and the unloaded current is high, with a
poor power factor. One Triad transformer that I ran tests on, showed
over 10 amps of unloaded current, and dropped to less than 1 amp with
the shunts removed. Others showed a similar trend. And amazingly, after
taking out the shunts, the secondary voltage only increased about 3-5
percent across the samples I converted.

2052. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <Z6Oz4.17653$84.594485@elnws01>
Source record: 62541
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge<ROOT@RADIOACTIVEX.LEBESQUE-AL.NET wrote in
message<SLRN8CUNPM.T9A.ROOT@RADIOACTIVEX.LEBESQUE-AL.NET ...

>None of HAS to be correct,
>but much as some people would like to believe otherwise, aesthetics
>probably has more to do with the theoretical insight of every great
>physical theory than anything else. Intuition is nothing more than
>having a good sense of aesthetics.

I would suspect that is backwards. We humans have developed an appreciation
for beauty (symmetry and order) and 'intuition' because it adaptationaly
successful, because nature is that way we can cope with it better if we are
aware of it.

Scott

2053. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <Z6Oz4.17654$84.594485@elnws01>
Source record: 62542
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Bilge wrote in message ...

> The problem with it being a soliton is that the soliton is the wrong way
> to optimize a wavepacket to give minimum uncertainties in the fourier
> tranform pairs, like \Delta p \Delta x . The optimal wavepacket is
> a gaussian.

What if the fluid-like nature of the vacuum is not impressed by the fourier transform? I mean if it is nonlinear, perhaps another basis function could better describe it, especialy those available with wavelets? Aren't there windowing problems with the fourier transform to deal with when using it to describe a composite impulse?

Scott

2054. "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: billb@eskimo.com
Message-ID: <8aobdo$uh2$1@eskinews.eskimo.com>
Source record: 62543
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

[Article crossposted from sci.physics.electromag]
[Author was Science Hobbyist]
[Posted on Wed, 15 Mar 2000 01:49:31 GMT]

I've put together a little website about the simple ideas
which underlie the "energy sucking" concept. These DO
NOT involve EM travelling waves and distant transmitters,
but instead focus only upon simple circuits. If we
can't come to agreement about this simple circuit, then
there's no point in arguing about "energy sucking"
antennas and waves in space.

Simple capacitive "antennas"
http://www.amasci.com/tesla/nearfld1.html

On the other hand, if the above circuit proves to have
a fundamental flaw, then "energy sucking antennas"
probably has the same flaw. The clearer I can make
the ideas, the more robust they become, but also the
easier it is to find any big holes.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.
--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science

2055. diode mixer questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-15 00:00:00 UTC
From: Fred <fdecker@compuserve.com>
Message-ID: <8aoh6s$53l$1@ssauraab-i-1.production.compuserve.com>
Source record: 62544
Cross-posted to: alt.engineering.electrical,rec.radio.amateur.homebrew,sci.electronics.basics

I am trying to learn how diode mixer circuits work, they are so simple, but I don't understand design issues about component values.

First. I have seen usually seen what looks like the input and the mix being fed into a diode that is fed to ground through a resistor. How do you choose the cap value? Are they just coupling capacitors?

What about impedance at RF levels? I will be in the 146mHz range and wondered about keeping a 50 ohm impedance to the output and do I need a high or 50 ohm impedance on the input? Does the diode have an impedance I should calculate?

Also, I have seen the resistor replaced by a choke, what's going on with that? How do I determine the value of the resistor or choke necessary? And why on some circuits is the output cap not used, especially if the choke is in there instead of the resistor?

Does it matter if the RF grounds are tied to the DC ground or do they have to be separate? I've seen it both ways. :(

In the circuit below I have seen the two resistors as 1k - 2.2k and the caps 100pf - 470pf. Can anyone explain this circuit to me? Thanks.

```
mix o------/\/\/\/\/------------------| |--------o in
|
|
\/ diode
|
|---------------| |---------0 out
|
/
\
/ resistor or choke
\
|
-------
---
-
```

```
--
Fred
N4IXL
ICQ:10254840
http://members.aol.com/fdecker
```

2056. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <38D17CFD.7D317F4B@ix.netcom.com>
Source record: 62395

David,
I've been using a homebrew dummy load for about 15 years. This consists of 20 1KOhm 2W carbon resistors soldered, with zero length leads, between two bits of PCB material, one soldered to the can lid and the other to the center conductor of the coax connector. the resistors are immersed in mineral oil. This will take 150 watts happily for as long as you like, and mine still reads within one or two percent of it's initial value. For higher powers you will need bigger resistors, or more of them. 200 10 KOhms maybe? It wouldn't be that big and should take 1KW for short periods in oil.

If you can get the big 50 Ohm job then you are in business, but they do tend to be rather expensive.

GL and 73
Dan AC6AO (G3NCR)

2057. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D17DDB.F3910B4A@mlecmn.net>
Source record: 62396
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:

> What is wrong with the math or conclusions on
> http://www.amasci.com/tesla/nearfld1.html ?
>
> You've said that there are errors on that website.
> What are they? I honestly want to know.
>

Quoting directly from your web site:

"To adjust R1 for maximum energy (matched impedance), we set R1 equal to the series reactance created by
the voltage divider, which is 1/(2*pi*f*100pF) or approximately 3.2K ohms."

This statement reflects a complete misunderstanding of impedance matching. The impedance of the capacitor is 0 -j3200. The impedance of the resistor is 3200 -j0 (or 3200 +j0, if you prefer). The _magnitudes_ of the impedance are the same in both cases, but one is totally reactive; the other is totally resistive. To get maximum power transfer, you need a _conjugate_ match, which requires an impedance of 0 +j3200 in series with the capacitor. It just happens that this is the condition for resonance. Since the real part of the "source" impedance is zero, maximum power transfer also requires that the load resistor be made equal to zero. Unfortunately, it takes infinite current to produce any power dissipation in a zero ohm resistor, but that's a minor detail.

There is nothing new or magic about small antennas containing high Q matching (or resonating, if you prefer) circuits. It's simply a game of making the antenna and its matching circuit as efficient as possible in order to transfer the maximum energy out of a transmitter or into a receiver, and people have been playing that game since the early days of radio. Resonance and impedance matching go hand in hand, and high Q is necessary to minimize losses in the antenna/matching network combination.

Please go and build the best energy sucking antenna you can, and then tell us if there is anything about its performance that is not consistent with long-established circuit and antenna theories.

Lyle, K0LR

2058. Re: transistor cross reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: TDLW <thelma@hawk.igs.net>
Message-ID: <8as7if$kq5$1@news.igs.net>
Source record: 62397

try to locate an old Sylvania ECG manual

2059. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8asmd5$8os$1@newcastle.cs.ubc.ca>
Source record: 62398

retxeh@blazenet.net writes:

>I have
>owned several cantennas, and I like the MFJ dry load much better.
> Also, I built a 100:1 voltage tap into mine to drive my tek 2215
>scope for monitoring rigs under repair.

What sort of resistors did you use for the 100:1 tap - ordinary
leaded types or surface mount?

I've been planning to put a 1000:1 ratio tap into one of my dummy
loads, basically turning the thing into a 60 dB pi-type attenuator.
I have been thinking of using surface-mount resistors (not likely to
be inductive), but don't know whether I need to put the resistor
network itself inside a shield to prevent RF pickup that bypasses
the resistors.

Dave

2060. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8asmsf$8pu$1@newcastle.cs.ubc.ca>
Source record: 62399

dvmcguire@mindspring.com writes:
>Does anyone have some designs for building a homebrew "cantenna"?

Take a look in older ARRL handbooks. The 1990 one has designs for two different ones. One uses a plain cylindrical ground around the load resistor and is good for use up to about 144 MHz. It will handle 1500 W for 10 min.

The other uses a tapered matching section into the resistor and a tapered ground around the resistor, and is usable up to 1.3 GHz, handling 1000 W for 5 min.

These are on pages 34-22 to 34-29 in the 1990 ARRL Handbook. They are probably in Handbooks from other nearby years as well.

Dave

2061. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <iJjROBsG7IdafccFv4tyLkYt43au@4ax.com>
Source record: 62400
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Wed, 15 Mar 2000 09:30:55 -0600, "Scott Stephens" <Scott2@Mediaone.net> wrote:
>Bilge<ROOT@RADIOACTIVEX.LEBESQUE-AL.NET wrote in
>message<SLRN8CUNPM.T9A.ROOT@RADIOACTIVEX.LEBESQUE-AL.NET ...
>
>>None of HAS to be correct,
>>but much as some people would like to believe otherwise, aesthetics
>>probably has more to do with the theoretical insight of every great
>>physical theory than anything else. Intuition is nothing more than
>>having a good sense of aesthetics.
>
>I would suspect that is backwards. We humans have developed an appreciation
>for beauty (symmetry and order) and 'intuition' because it adaptationaly
>successful, because nature is that way we can cope with it better if we are
>aware of it.

Anthropomorphic principle. Nature is the way it is because if it were different,
we couldn't be here to observe it. In other words, we can imagine a universe
with different laws, but we couldn't live in it because it couldn't support human
life.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

2062. Urgent: Can anybody help me with a 433 MHz project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Claudia Graf <cgraf@datacomm.ch>
Message-ID: <38d02b9b@news.datacomm.ch>
Source record: 62461

For a very special purpose I built a radio beacon transmitting on 433.92
MHz. As transmitter module I use a
Radiometrix (www.radiometrix.co.uk) tx2 transmitter. Its output is 10mW on
50Ohms. The beacon is controlled
by a Pic Microcontroller.
Everything works so far, but what I need is a better output of about 300 mW.
Can it be done with just a few parts ?
The PCB board which I will design has to be as small as possible (the 10mW
version is 1.5 X 0.5 inches...)

Can anybody help me ????

Thanks
Chris

I can be reached under cgraf@datacomm.ch

2063. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8apc9hjbo1@nnrp1.deja.com>
Source record: 62462
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In article <slrn8ct2np.t9a.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> I've presented objections which in the context of current
> E&M theory are valid. You haven't cited the papers as I've
> asked and you've not shown that anything I've said is
> incorrect. It's up to you to provide some evidence that
> either E&M is incorrect or I am incorrect, since I believe
> I've shown that in the context of E&M as it's known ,
> what you've claimed cannot be correct.

Let me TRY to cut through the misunderstandings here.
I think I understand your objections for the most part,
and I will reply, but I'm *NOT* yet clear on WHICH things
you're objecting to.

I claim that by adding a tuned circuit to a short
dipole antenna, I can make a load resistor dissipate
more energy than if the tuned circuit was not present.
You DON'T object to this, right? You say that it's merely
a matter of impedance matching. Or have I misunderstood?

Are you only objecting to my weird "energy sucking"
language? Or are you also objecting to my assertion that
a load resistor can run hotter if a tuned circuit
is part of a short antenna?

Also, do you accept that the effect depicted on
http://www.amasci.com/tesla/nearfld1.html is real?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2064. Re: DISH LNBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Colin <colinlowe@jet.es>
Message-ID: <8apb1mkdh1@lola.ctv.es>
Source record: 62463

Jack,

http://www.qsl.net/pa3gco/bluecap/blue.html has some great conversion details on a old Blue Cap LNB, this is for TX though.....For RX I use a standard Astra LNB and have adjusted the size of the puck (White small ceramic tablet looking thing) by sticking a small amount of glass onto the puck.

I found that glass or another ceramic material on the puck drops the frequency (In my case 500MHz) and a metallic material will increase the frequency. I spent ages cutting and grinding glass to fit to the puck, but in the end I managed to get me LNB down to 10.450 GHz.

Hope this helps......

73 de Colin

Jack Taylor wrote in message ...
>Has anyone characterized a DISH network LN B to see if it will receive in
>the 10 GHz hamband?
>
>73 de Jack
>
>
>

2065. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8apda8$k4o$1@nnrp1.deja.com>
Source record: 62464
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

In article <38D008C9.9A451535@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
> It seems to me what you've discovered there is simply an example of
> conjugate matching.

Exactly.

I'm having trouble with this discussion because some
people apparantly are saying that the effect shown on
http://www.amasci.com/tesla/nearfld1.html is impossible
and does not exist. At least I THINK that's what they
are saying. I'm not sure. Before I continue going on
about "energy-sucking antennas", I want to hear whether
everyone accepts that this capacitor effect is normal
and boring and well-known, and certainly doesn't
violate any fundamental physics.

The next stage of my arguement is to put the little
capacitor-antennas in empty space and present them
with waves from a distant radio transmitter. The same
effect should arise: the antenna with the tuned circuit
should do better at heating its resistor than the antenna
without the tuned circuit.

(Newcomers please note that the capacitor-antenna is
electrically small; its size is << than a wavelength.)

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2066. Re: DISH LNBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38D033AC.C965899B@sympatico.ca>
Source record: 62465

Jack Taylor wrote:

> Has anyone characterized a DISH network LN B to see if it will receive in
> the 10 GHz hamband?

Why not try it and see?

Converted Ku-band LNBs are a staple of wideband 10 GHz operation.
Depending on the exact frequency they will either use an image
response in our band, or a custom DRO puck, or one with stuff
glued to it to change the frequency. They work well.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

2067. Re: Urgent: Can anybody help me with a 433 MHz project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <PzWz4.1316$f_.64162@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62466

10 mW = +10 dBm
300 mW = +24.8 dBm

Gain needed: 14.8 dB.

I suppose that you could easily perform this amplification with two gain stages, conservatively speaking. Others may argue that only one gain stage is needed.
More than a few parts would be an input matching network, the
first gain stage with bias components, coupling to the second stage, bias, and
an output matching network. You also have to check the regulations for maximum power, and the maximum spurs allowed, which means that you may need an output lowpass or bandpass filter.
But perhaps not at this low power level.
These parts are relatively small, however, your second (output) stage will need heat sinking
if you are operating class A.
Sounds like a fun project. Best of luck.
Al

Claudia Graf wrote in message <38d02b9b@news.datacomm.ch>...
>For a very special purpose I built a radio beacon transmitting on 433.92
>MHz. As transmitter module I use a
>Radiometrix (www.radiometrix.co.uk) tx2 transmitter. Its output is 10mW on
>50Ohms. The beacon is controlled
>by a Pic Microcontroller.
>Everything works so far, but what I need is a better output of about 300 mW.
>Can it be done with just a few parts ?
>The PCB board which I will design has to be as small as possible (the 10mW
>version is 1.5 X 0.5 inches...)
>
>Can anybody help me ????
>
>Thanks
>Chris
>
>I can be reached under cgraf@datacomm.ch
>
>

2068. Re: Back issues of QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38d051a3.106688070@news.azstarnet.com>
Source record: 62467

On Wed, 15 Mar 2000 23:11:49 GMT, LA8AK@online.no (J M Noeding) wrote:

>I am not a member of ARRL, but receive old issues from a club, is it
>some way I could find index for my old QST's in the period 1980-1996
>
>73 jan-martin
>LA8AK

89-98

Jan-Martin,

There are online indices for 1989 to 1998 issues at:

http://oak.oakland.edu/pub/hamradio/arrl/infoserv/qst/

I don't know of any for earlier issues.

If you have a topic in mind, try looking at:

http://oak.oakland.edu/pub/hamradio/arrl/infoserv/bibliog/

and you might find that the subject is in one of your issues.

73,

Wes N7WS

2069. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8app7s$sf7$1@nnrp1.deja.com>
Source record: 62468
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <RD7QOGOjoavVlzLotxxaKt7oM8sk@4ax.com>,
John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
> On 15 Mar 2000 15:49:12 GMT, billb@eskimo.com (William Beaty) wrote:
>
> | Simple capacitive "antennas"
> | http://www.amasci.com/tesla/nearfld1.html

> I think your circuit model is too simplistic.

It was meant to be. I'm making it very simple so that
the flaws become easily seen (or their lack becomes
obvious).

The tuned circuit in http://www.amasci.com/tesla/nearfld1.html
causes more energy to be available to the load resistor.
It's not simple a bandpass filter; there are some
energy effects here.

> In the no-inductor case,
> assume Rl is infinite; now reduce C1 (leave the C1 plates the same
> distance apart, but just reduce their area). Your simple circuit model
> predicts that the voltage across C1 approaches Vgen as the plates are
> made smaller, which is clearly not the case.

Not correct, because the parasitic coupling capacitances
will also shrink as you reduce the area of the C1 plates,
leaving the 100:1 division ratio about the same.

However, note that the whole point is to compare the
two circuits. Does the tuned circuit allow R2 to
receive more energy than R1? Unless there is
something fundamentally flawed about my reasoning,
the answer is yes. If I've made small errors which
reduce the 100:1 power ratio, the answer is still yes,
as long as that ratio is significantly above 1:1.

Also, this isn't a discussion of the practical
problems. Several people have insisted that this
cannot work even in theory!

> And why argue? Just build one and try it.

Good point, but a simple schematic on a website can
clarify many issues, while a real-world device sitting on
my lab bench is inaccessable to folks on newsgroups.
And besides, if I build it and it generally operates

as I say, then those who have something against
these sorts of ideas will just insist that I've made
measurement errors, or that I'm perpetrating a hoax
or something. By focusing discussion on a schematic,
many hidden flaws can be exposed, and onlookers can
reason it out for themselves.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2070. subscribe

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: n9iww2@gte.NET
Message-ID: <NCBBINBIOLCMNCAMMICLAEIJCAAA.n9iww2@gte.net>
Source record: 62469

add-homebrew

2071. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38D0A724.9AEDEAAD@nospam.gecm.com>
Source record: 62470
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Science Hobbyist wrote:

> In article <38D008C9.9A451535@agilent.com>,
> Tom Bruhns <tom_bruhns@agilent.com> wrote:
> > It seems to me what you've discovered there is simply an example of
> > conjugate matching.
>
> Exactly.
>
> I'm having trouble with this discussion because some
> people apparantly are saying that the effect shown on
> http://www.amasci.com/tesla/nearfld1.html is impossible
> and does not exist. At least I THINK that's what they
> are saying. I'm not sure. Before I continue going on
> about "energy-sucking antennas", I want to hear whether
> everyone accepts that this capacitor effect is normal
> and boring and well-known, and certainly doesn't
> violate any fundamental physics.
>
>

"Boring and well known" is the right end of the spectrum,
maybe "boring" is a bit too strong. A small antenna always
looks like a source with resistance and reactance (R+jX).
X is <0 for dipole-type antennas and >0 for loop types. As
you wind the frequency down, R decreases and abs(X)
increases so that when you conjugate-match the source
impedance (thus forming a tuned circuit), the Q goes up and
the bandwidth goes down.
For dipole-type (electric) antennas, R varies as f^2 and X
varies as 1/f (like a fixed capacitance). For loops (magnetic),
R varies as f^4 and X varies directly with f like a fixed
inductance. In each case Q (roughly X/R) varies as 1/f^3 so
the bandwidth f/Q varies as f^4.
In practice, the bandwidth can be maintained by adding extra
resistance which reduces Q. This produces losses such that
antenna gain times bandwidth remains roughly constant. An
AM radio's loopstick is a good example - its loss resistance
may reduce the available signal by over 60dB but its
bandwidth is adequate and it is a good antenna for its purpose.
Alan

2072. Re: Registration of domain with ExitExchange.com

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: reg@exitexchange.COM
Message-ID: <200003160935.BAA25502@www.exitexchange.com>
Source record: 62471

Here's how to register.

ExitExchange is the fastest way to grow your website. Every time someone leaves your website ExitExchange sends you new traffic. More effective than banners, ExitExchange actually brings real traffic right to your front door. Whether you're a large corporation or just a single homepage, there has never been an easier way to promote your website. Experience the explosive growth you've been dreaming of for your website. Put the power of the ExitExchange Orbit Network® to work for you and start counting
the hits immediately.

Ohhh... and did we mention it's absolutely FREE!

Sign up is simple and takes just a few minutes (literally). Come take our Quick Tour and see for yourself how easy it is to Get Big, Real Big, Really Fast with ExitExchange.com

http://www.exitexchange.com

Sincerely,
ExitExchange Registration Services
"Never Say Goodbye To Your Traffic Again"

//
One time mailing, no need for removal.
//

2073. Re: Back issues of QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: knox_k_NOBS@nemaine.com
Message-ID: <38d0bb19.598821@news.nemaine.com>
Source record: 62472

On Wed, 15 Mar 2000 23:11:49 GMT, LA8AK@online.no (J M Noeding) wrote:

>I am not a member of ARRL, but receive old issues from a club, is it
>some way I could find index for my old QST's in the period 1980-1996
>
>73 jan-martin
>LA8AK

Hi Jan-Martin.

Indexes for 1989 thru 1998 are available online at:

http://oak.oakland.edu/pub/hamradio/arrl/infoserv/qst/

Ken (N1JRO)

2074. Perfect jump start chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: tonys2@aol.com
Message-ID: <20000316074500.22459.00001056@ng-cn1.aol.com>
Source record: 62473

Several for sale
go to www.labx.com
search for item 43168
Tony
Alex Va.

2075. FS Microwave intrusion det (2)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: tonys2@aol.com
Message-ID: <20000316074648.22459.00001057@ng-cn1.aol.com>
Source record: 62474

2 unused SW Microwave 300B detection units
Tony
alex Va

2076. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d1mrt.bio.root@radioactivex.lebesque-al.net>
Source record: 62475
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

>In article <38D008C9.9A451535@agilent.com>,
>Tom Bruhns <tom_bruhns@agilent.com> wrote:
>> It seems to me what you've discovered there is simply an example of
>> conjugate matching.
>
> Exactly.
>
> I'm having trouble with this discussion because some
> people apparantly are saying that the effect shown on
> http://www.amasci.com/tesla/nearfld1.html is impossible
> and does not exist. At least I THINK that's what they
> are saying. I'm not sure. Before I continue going on
> about "energy-sucking antennas", I want to hear whether
> everyone accepts that this capacitor effect is normal
> and boring and well-known, and certainly doesn't
> violate any fundamental physics.

NO. What everyone is trying to tell you is that there is
nothing at all strange about having the power transfer
change as a function of impedance. You just wont believe
that there should be a difference if it were not for the
"energy sucking" bit. Your circuits are NOT equivalent
by any stretch of the imagination.

2077. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d1o4e.bio.root@radioactivex.lebesque-al.net>
Source record: 62476
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

> The tuned circuit in http://www.amasci.com/tesla/nearfld1.html
> causes more energy to be available to the load resistor.
> It's not simple a bandpass filter; there are some
> energy effects here.
>

This is part of your misunderstanding. A filter of ANY sort
is a filter ONLY because of "energy effects". You just cannot
filter without it being an "ebergy effect". Where does the
power go? Think VSWR.

> And besides, if I build it and it generally operates
> as I say, then those who have something against
> these sorts of ideas will just insist that I've made
> measurement errors, or that I'm perpetrating a hoax
> or something. By focusing discussion on a schematic,
> many hidden flaws can be exposed, and onlookers can
> reason it out for themselves.
>

I just think you're explaining something that doesnt require
explaining.

2078. HP606A Signal Generator Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Joe Schreiber <jschreiber@adelphia.net>
Message-ID: <yl7A4.1$b5.207095@news2.news.adelphia.net>
Source record: 62477
Cross-posted to: misc.industry.electronics.marketplace,rec.radio.amateur.homebrew

This is a good quality spiral bound copy of the Operating and Service Manual for the Hewlett Packard HP606A Signal Generator. Includes Operating instructions, Theory of operation, Maintenance, Schematics, and Parts Lists. I carefully checked the entire manual for completeness and legibility.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=280193280

2079. Re: DISH LNBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <Ki8A4.61981$Pa1.1700331@news6.giganews.com>
Source record: 62478

Thanks Colin and Laura, you have given me courage to experiment! Have
located an inexpensive source for the little RCA 18 inch dishes and single
LNBs ($30.00 shipped). Was thinking this might be an avenue for 10 GHz
experimentation and thought I'd ask the group before investing.

73 de Jack

Colin wrote in message <8apb1mkdh1@lola.ctv.es>...
>Jack,
>
>http://www.qsl.net/pa3gco/bluecap/blue.html has some great conversion
>details on a old Blue Cap LNB, this is for TX though.............For RX I
>use a standard Astra LNB and have adjusted the size of the puck (White
>small ceramic tablet looking thing) by sticking a small amount of glass
onto
>the puck.
>
>I found that glass or another ceramic material on the puck drops the
>frequency (In my case 500MHz) and a metallic material will increase the
>frequency. I spent ages cutting and grinding glass to fit to the puck, but
>in the end I managed to get me LNB down to 10.450 GHz.
>
>Hope this helps......
>
>73 de Colin
>
>

2080. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D11916.35230E59@agilent.com>
Source record: 62479
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Could we just cut to the chase here? Is there anything new in expecting
to match the load to the antenna to maximize power in the load? That's
still pretty boring to me, I'm afraid. Now if you can find an
efficient way to match an antenna which can be represented by
0.01-j10000 ohms to a load (without using superconducing inductors),
THAT will get me interested. Using such an antenna (a typical very
short dipole [about 0.044 radians long; about 2 meters long at 1MHz] or
single element fed against a ground plane) as a transmitting antenna
would still likely have problems, even with a high efficiency matching
network, because even 1 watt will cause some rather high fields: the
feedpoint will see 100 amps and 1 megavolt in that example.

Cheers,
Tom

Science Hobbyist wrote:
>
> In article <38D008C9.9A451535@agilent.com>,
> Tom Bruhns <tom_bruhns@agilent.com> wrote:
> > It seems to me what you've discovered there is simply an example of
> > conjugate matching.
>
> Exactly.
>
> I'm having trouble with this discussion because some
> people apparantly are saying that the effect shown on
> http://www.amasci.com/tesla/nearfld1.html is impossible
> and does not exist. At least I THINK that's what they
> are saying. I'm not sure. Before I continue going on
> about "energy-sucking antennas", I want to hear whether
> everyone accepts that this capacitor effect is normal
> and boring and well-known, and certainly doesn't
> violate any fundamental physics.
>
> The next stage of my arguement is to put the little
> capacitor-antennas in empty space and present them
> with waves from a distant radio transmitter. The same
> effect should arise: the antenna with the tuned circuit
> should do better at heating its resistor than the antenna
> without the tuned circuit.
>
> (Newcomers please note that the capacitor-antenna is
> electrically small; its size is << than a wavelength.)
>

> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2081. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d11bef.2335063@news.online.no>
Source record: 62480

On Wed, 15 Mar 2000 04:29:14 GMT, mzenier@netcom.com (Mark Zenier)
wrote:

>In article <sctist9qs2r77@corp.supernews.com>,
>THE MICHAEL <nowhere@kenowhere.com> wrote:
>>
>>Mark Zenier <mzenier@netcom.com> wrote in message
>>> There was a multimode detector project article in QST about 5 years ago
>>> that used an FM IF (NE604?) for FM and a NE602 for the AM using these
>>> techniques.
>
>>Can you narrow it down a little?
>
>No, sorry, I wasn't a subscriber and all I saw of it was a photocopy
>of the article that a friend who was going to build it had. I'd say in
>the 1994-1996 era, though.
>
the only possible articles I could find when checking QST index
(tnx, Bill W0IYH) 194 onwards are:

December 1995
Courson "The AM Radio Network" p.46

May 1996
Carver "High Performance AGC/IF Subsystem" p.39 (rcvr)
(feedback Dec 96 p.71)

an important point when writing an index is to add key-words, I might
check through those QST's I have, but it seems difficult

73 jan-martin
LA8AK

2082. "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: dvmcguire@mindspring.com
Message-ID: <38d11de6.17351799@news.mindspring.com>
Source record: 62481

I was just at the Charlotte hamfest, and didn't see some things I needed. So, I thought, maybe I can build one of the items.

Does anyone have some designs for building a homebrew "cantenna"? Thank you.

David
--
David V. McGuire (mailto: dvmcguire@mindspring.com)
Danville, Virginia, USA
Amateur Radio Callsign: AE4LH
Trumpet: Jupiter 1200S
Life is Short: PRAY HARD!

2083. Re: how does it work ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Piero <picaruso@dontwriteme.com>
Message-ID: <8ar8iq$5bu$1@fe1.cs.interbusiness.it>
Source record: 62482
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

... in how many words?!
Jokes apart, if you are intersted, you shoud buy a
book on the subject.
There's a long way between the micro and the antenna!
Too long to explain here.
Good luck. 73 de IK2VTJ, Piero.

aguessy fidegnon ha scritto nel messaggio
<38CE33ED.FA26AF2B@rc.bel.alcatel.be>...
>can anyone tell me how the is modulated (analog or
digital) and
>everything that is happening between the microphone
and the antenna .
>
>thanks
>

2084. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d12574.4771764@news.online.no>
Source record: 62483

On Wed, 15 Mar 2000 23:31:28 -0500, blackm00@cam.org (Michael Black)
wrote:

>
>Anyway, it was QST for July 1993 that had the article, "A Synchronous
>Detector for AM Transmissions" by Jukka Vermasvuori of Finland.
>
>It has both a synchronous detector, with a PLL that locks to the incoming
>carrier, and a "quasi-synchronous detector" of the type we are talking
>about here.
>
>What's interesting to this discussion is that it uses NE602s for
>the actual product detectors. The NE604 provides the limiter for
>the 602 used as a quasi-synchronous detector, while the actual
>quadrature detector in the 604 normally used for FM detection is
>used as a phase detector. The oscillator in the 602 used for
>synchronous detection is used for the VCO that locks to the incoming
>signal.
>
> Michael VE2BVW

tnx, I have now studied the circuit diagram. When building the
complete OH2GF circuit you need a phase detector, and it seems easy to
use the balanced modulator inside NE604, but if you only need a
quasi-synchronous detector it seems no reason for not using this
stage.

One problem with the complete circuit is that 455khz VCO may spread
signal back into the receiver and cause more or less interference. The
amount of problem depends on which receiver you use, but don't imagine
adding this circuit to a BC-radio.

LA7MI solved this problem 20 years ago using 910kHz VCO for his add-on
used with FRG-7. I wished to copy it, but had problems because he used
only discrete components - had to invert connections to a ringmixer if
it didn't lock, but when loop gain is low it may or may not lock, so I
reversed the connections some times and resigned. It would be an idea
to improve the old circuit using modern devices, but I do not really
listen to AM broadcast much any more, Radio Luxembourg is closed
several years ago but I don't know about BBC Radio 1.....

If some interest, I could look for LA7MI's circuit and scan it.

73
jan-martin
LA8AK

2085. Re: Urgent: Can anybody help me with a 433 MHz project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d128ae.5598681@news.online.no>
Source record: 62484

On Thu, 16 Mar 2000 01:12:37 +0100, "Claudia Graf" <cgraf@datacomm.ch>
wrote:

>For a very special purpose I built a radio beacon transmitting on 433.92
>MHz. As transmitter module I use a
>Radiometrix (www.radiometrix.co.uk) tx2 transmitter. Its output is 10mW on
>50Ohms. The beacon is controlled
>by a Pic Microcontroller.
>Everything works so far, but what I need is a better output of about 300 mW.
>Can it be done with just a few parts ?
>The PCB board which I will design has to be as small as possible (the 10mW
>version is 1.5 X 0.5 inches...)
>
yes, a very easy approach is Motorola MHW720 power module, but you may
find other surplus modules from mobile telephones on 440-470MHz.
The MHW720 usually gives full RF output on 432 with 10mW or so.

I plan to use MHW720 on some of my beacons, I have built 15 totally
over the years for 144, 432, 1296, 2320MHz, believe I participated in
two 10m beacon projects, too.

For 70cm it is easy to mount, you just use tinned iron plate (those
are very popular in Germany and around) under the power module, and
make short groundconnections to this plate, it must also go under the
power module so it has good ground, but remember cooling pasta under
the power module and between the plate and cooling

UHF Unterlage shows some printed circuit boards which goes with
M57762 for 23cm, but it seems not important for 2m and 7c0m

It also exists some smaller power modules, DF9IC seems to like such in
his packet radio transmitters, but I have no experience with using
such

73 jan-martin
LA8AK

2086. Re: Back issues of QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d12ae5.6165741@news.online.no>
Source record: 62485

On Thu, 16 Mar 2000 10:45:45 GMT, knox_k_NOBS@nemaine.com (Ken Knox (N1JRO)) wrote:

>On Wed, 15 Mar 2000 23:11:49 GMT, LA8AK@online.no (J M Noeding) wrote:
>
>>I am not a member of ARRL, but receive old issues from a club, is it
>>some way I could find index for my old QST's in the period 1980-1996
>>
>>73 jan-martin
>>LA8AK
>
>Hi Jan-Martin.
>
>Indexes for 1989 thru 1998 are available online at:
>
>http://oak.oakland.edu/pub/hamradio/arrl/infoserv/qst/
>
>Ken (N1JRO)

mni tnx to both of you

73 jan-martin

2087. Re: 80 meter loop

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8arf54$3t2$1@nnrp1.deja.com>
Source record: 62486

In article <20000314205111.02476.00002321@ng-ca1.aol.com>,
bujiaj8@aol.com (BUJIAJ8) wrote:
> I want to build a 80 meter loop... so ... does anyone know of good
websites for
> information on loop antennas.?/ pls email
>
> bill
>

You can build a bi-band loop antenna; a 1 wavelength for 80 and 1/2
wavelength for 160 or a smaller one, 1 wavelength for 40 m and 1/2
wavwlength for 80.
You can look at The ARRL Antenna Book. It's a very good source of info.
--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2088. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8arim0$6od$1@nnrp1.deja.com>
Source record: 62487
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

In article <slrn8d1mrt.bio.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> > Before I continue going on
> > about "energy-sucking antennas", I want to hear whether
> > everyone accepts that this capacitor effect is normal
> > and boring and well-known, and certainly doesn't
> > violate any fundamental physics.
>
> NO. What everyone is trying to tell you is that there is
> nothing at all strange about having the power transfer
> change as a function of impedance.

You said that you found errors on
http://www.amasci.com/tesla/nearfld1.html

You haven't yet said what they are.

Therefore, I don't know how to go forward with any
kind of discussion, because I cannot see the errors
on that website.

For the moment, I'm abandoning the "energy sucking" debate
and trying to get some very simple questions answered:

1. Is the stuff on that webpage correct?

2. And if not, then where are the big flaws?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2089. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8arj8g$77q$1@nnrp1.deja.com>
Source record: 62488
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <slrn8d1o4e.bio.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> > The tuned circuit in http://www.amasci.com/tesla/nearfld1.html
> > causes more energy to be available to the load resistor.
> > It's not simply a bandpass filter; there are some
> > energy effects here.
>
> This is part of your misunderstanding.

What is wrong with the math or conclusions on
http://www.amasci.com/tesla/nearfld1.html ?

You've said that there are errors on that website.
What are they? I honestly want to know.

--
(((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
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2090. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8arjk7$7k4$1@nnrp1.deja.com>
Source record: 62489
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <newscache$801irf$v6b@gw.ihg.com>,
"David Emrich" <demrich@ihgtech.com.au> wrote:
> > Good point, but a simple schematic on a website can
> > clarify many issues, while a real-world device sitting on
> > my lab bench is inaccessable to folks on newsgroups.
>
> Ah yes, but if you publish what you did to build the thing (eg,
mechanical
> dimensions, etc) the others can replicate your results (or not), and
help to
> prove/disprove your ideas.

I'm holding off on discussing my ideas, and instead looking
for something very simple: major errors on the website:

http://www.amasci.com/tesla/nearfld1.html

If they are there, I cannot see them, but perhaps
somebody here will see things I miss.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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2091. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8ark5l$82r$1@nnrp1.deja.com>
Source record: 62490
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

In article <38D0A724.9AEDEAAD@nospam.gecm.com>,
Alan Boswell <alan.boswell@nospam.gecm.com> wrote:
> Science Hobbyist wrote:
> > I'm having trouble with this discussion because some
> > people apparantly are saying that the effect shown on
> > http://www.amasci.com/tesla/nearfld1.html is impossible
> > and does not exist. At least I THINK that's what they
> > are saying. I'm not sure. Before I continue going on
> > about "energy-sucking antennas", I want to hear whether
> > everyone accepts that this capacitor effect is normal
> > and boring and well-known, and certainly doesn't
> > violate any fundamental physics.
>
> "Boring and well known" is the right end of the spectrum,
> maybe "boring" is a bit too strong.

Are you saying that there are no major errors on
http://www.amasci.com/tesla/nearfld1.html ?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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2092. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8arl4a$8lu$1@nnrp1.deja.com>
Source record: 62491
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In article <8aqcvn$sjt@nntpb.cb.lucent.com>,
"kileak" <sguille@lucent.com> wrote:
> working in the area of rx/tx (especially microwaves)
> i should say that i agree with this sentence.
> the tuned circuit will increase the power coming in the load.
> so and ???

That increase in power is one part of an ongoing debate.
Some of the people in the debate SEEM to be saying that
the stuff on http://www.amasci.com/tesla/nearfld1.html
violates fundamental physics principles. Others SEEM
to be saying that this stuff is normal and conventional.

I'm hoping that anyone who objects to the stuff on
that website will help cut through the "noise" by
clearly voicing their objections (and perhaps by pointing
out where the flaws lie.)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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2093. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8arouebkg1@nnrp1.deja.com>
Source record: 62492
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

In article <38CDD9DE.C10E5614@xprint.ca>,
Joseph Legris <jalegris@xprint.ca> wrote:
> The tactics employed by scientists are closer to debating
> than you might allow. Can you imagine an exchange of letters
> between a pair of competing scientists where one backs down
> and says, "By George, you're right - my interpretation is
> nonsense and I've completely bungled this analysis".

Scientists of high integrity will do exactly this. Feynman
discusses "scientific integrity" in the whole second half
of his article called "Cargo-cult Science." He calls it
"a principle of scientific thought that corresponds to a
kind of utter honesty--a kind of leaning over backwards."
This utter honesty requires that we admit our mistakes
publicly as soon as we discover them.

In a scientific discussion among people of integrity, typical
"debating tactics" used on newsgroups become abhorrant.

For example, if it looks like I'm about to be proved wrong
in public, and therefore I start sowing confusion, or
suddenly attacking unimportant details, or mysteriously
changing the subject, or suddenly becoming angry in order
to deflect attention, then my behavior shows that "winning"
and "losing" is far more important to me than getting at the
truth. My behavior might be normal for newsgroup debates,
but people of integrity do not do such things.

Perhaps many scientists lack integrity. Perhaps "being
right" or "avoiding public embarassment" is more important
to them than insights and truth. Perhaps they would rather
preserve their egos by hiding their mistakes, as opposed to
shining a bright light on their mistakes so that others
will not be misled. That doesn't mean that scientific
integrity doesn't exist. It just means that it is rare.

CARGO CULT SCIENCE
http://www.physics.brocku.ca/etc/cargo_cult_science.html

> It
> never happens, at least not in public.

It certainly does! It's happening right now. One major
reason I'm pursuing this "energy sucking" stuff on
sci.physics.electromag is to give others the opportunity

to show me my horrible errors. When that occurs, you'll know it, because I will clearly state that the light has dawned for me, and that the other side was right all along. (No, it has not occurred yet, since I see good counter-arguments to MOST of the objections I've heard so far.)

> It's not up to them
> to resolve their differences - the test of time is the one
> that counts.

Very sad that this is often true. Max Planck says it thus:

"A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather because its opponents eventually die and a new generation grows up that is familiar with it." - M. Planck

I'm amazed to find that this also applies to simple little concepts as well as to "new scientific truths." If people are introduced to an idea which they haven't encountered before, often they will adopt a stance of heavily-defended disbelief, and would rather fight it to the death than to admit that their knowledge is incomplete. This is particularly a problem in the sciences, and with those who fancy themselves to be experts. Science attracts people who cannot stand to be proved wrong. (I should know, since that's why I was attracted to it myself!) To counteract this tendency, it is better to be humble like Einstein, and to consider oneself to be a mere student, rather than to be certain of our great expertise and therefore to become increasingly immune to learning anything new.

Another good article besides "cargo cult" is this one:

KEEPING YOUR BEAD ON THE WIRE:
http://www.amasci.com/freenrg/bead.txt

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

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2094. QRP article in Sept, 1990, 73 Amateur Radio....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8arng1$af4@unix2.cc.ksu.edu>
Source record: 62493

Someone recently gave me a few "73 Amateur Radio" issues for 1990,
and Mike Bryce's (WB8VGE) QRP column in the October issue starts out:

"Last month I described one of my personal favorites, a VFO...."

Unfortunately Murphy struck, and I did NOT receive the September issue!

If anyone has built that particular VFO, I'd appreciate hearing
how it worked, how you like(d) it, etc.

Or, if anyone has that particular issue, I'd like to receive a copy
of the QRP column for that month. (So I don't get a zillion copies,
it might be best if you'd email me first....)

--Myron, W0PBV.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (Professor Emeritus) "Barbershop" tenor. CDL(PTX) W0PBV (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

2095. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-16 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <c_dA4.5885$mf.417707@bgtnsc05-news.ops.worldnet.att.net>
Source record: 62494

David V. McGuire wrote in message <38d11de6.17351799@news.mindspring.com>...
>I was just at the Charlotte hamfest, and didn't see some things I
>needed. So, I thought, maybe I can build one of the items.
>
>Does anyone have some designs for building a homebrew "cantenna"?
>Thank you.
>
>David

See what value of non-inductive power resistors that you can get your hands on. Wirewounds are not good.
50 ohms, 100 ohms, whatever. Then work out a series parallel combination.
For example, solder them in a parallel group of five 50 ohms to make 10 ohms. Then put 5 of these
bunches in series, so they total 50 ohms.
Buy a new virgin paint can from a hardware store. Drill a hole in the top, and mount the appropriate
bulk head connector. Mount your resistor array to the connector, so everything is hanging from the lid.
Fill up the can with NON-FLAMMABLE, non-conductive oil.
You may wish to build an adapter which contains a coupler, or attenuator and perhaps a diode detector for frequency
measurement. I did this externally, using a Tee adapter.
One more thing, try to keep the can level.
The oil has a tendency to leach out of the lid or connector area over the years.
This kind of dummy load is one of those things that any resourceful ham can build.
Good luck,
Al

2096. transistor cross reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: bujiaj8@aol.com
Message-ID: <20000316204410.11749.00001621@ng-ci1.aol.com>
Source record: 62401

Can someone provide me with info on transistor substitution or cross reference?
tnx
bu

2097. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <n913dscnh72cds7hkulqgr6finsavf4ean@4ax.com>
Source record: 62402
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On 15 Mar 2000 15:49:12 GMT, billb@eskimo.com (William Beaty) wrote:

> Simple capacitive "antennas"
> http://www.amasci.com/tesla/nearfld1.html
>
> On the other hand, if the above circuit proves to have
> a fundamental flaw, then "energy sucking antennas"
> probably has the same flaw. The clearer I can make
> the ideas, the more robust they become, but also the
> easier it is to find any big holes.

For just a moment, forget you ever saw C1 and R1. Take a look at the tuned circuit.

If R2 were made infinite, then the voltage across C2 should increase to become equal to the voltage applied to the large plates.

With no voltage across either Ca, then there would be no current through either Ca and no power could be transferred from the generator to the infinite valued R2.

If R2 were made zero Ohms, there would be no voltage across C2 and no power could be transferred to the zero valued R2.

For some particular value of R2 in between zero and infinity, a maximum amount of energy is transferred from the generator to R2.

That's all obvious to me and probably to you as well. There is a single particular value for R2 that maximizes the power transferred to it.

Removing L1 changes the particular value of R2 that results in maximum power being transferred. The "interesting" thing is not that adding an inductor improves the power by 100 times, it's the fact that removing the inductor *reduces* the maximum available power by 100 times.

In the case of EM waves, free space, a vacuum, has an impedance of around 370 Ohms, IIRC. Any resistor inserted in an EM field other than one with a value of 370 Ohms intercepts less power than one matched to the impedance of free space.

Jim

2098. Re: transistor cross reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: "John D. Farr" <johnfarr@ro.com>
Message-ID: <8ihA4.8034$511.2076026@tw11.nn.bcandid.com>
Source record: 62403

Try http://www.nteinc.com/ . gl, John

"BUJIAJ8" <bujiaj8@aol.com> wrote in message
news:20000316204410.11749.00001621@ng-ci1.aol.com...
> Can someone provide me with info on transistor substitution or cross
reference?
> tnx
> bu

2099. Tube lore

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000316221725.02632.00002436@ng-fh1.aol.com>
Source record: 62404

Wher do I find a copy of this.thanks . Harold W4PQW

2100. Re: Tube lore

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000316225054.15494.00005010@ng-de1.aol.com>
Source record: 62405

>Re: Tube lore
>Wher do I find a copy of this.thanks . Harold W4PQW
>

Tube Lore by Ludwell Sibley is cheapest from Paul Washa (that's where I found mine last time)....haven't heard from him in awhile but here is his last known email address...

w0tok@email.msn.com

also he has tons of other books too....

Regards,
Joe Pratt, Tubecntral@aol.com

2101. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8asfd1$r6s$1@nnrp1.deja.com>
Source record: 62406
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <38D17DDB.F3910B4A@mlecmn.net>,
Lyle Koehler <lyle@mlecmn.net> wrote:
> Science Hobbyist wrote:
>
> > What is wrong with the math or conclusions on
> > http://www.amasci.com/tesla/nearfld1.html ?
> > You've said that there are errors on that website.
> > What are they? I honestly want to know.
>
> Quoting directly from your web site:
>
> "To adjust R1 for maximum energy (matched impedance), we set R1 equal
to
> the series reactance created by
> the voltage divider, which is 1/(2*pi*f*100pF) or approximately 3.2K
> ohms."
>
> This statement reflects a complete misunderstanding of impedance
> matching.

No, it means that I should change the wording because
you're right, "matched impedance" does not describe
what I'm trying to do by adjusting R1. I'm trying to
find the BEST RESISTANCE VALUE for R1: the value that
gives the highest power that a purely resistive load can
attain in this situation. I understood that Pd max
for a resistor in a simple series RC circuit occurs
when R1 = 1/(wC). Maybe this is wrong.
Let's see...

If I calculate Pd for R1, and seeing that Ca << C1, I
get:

Pd = 100^2 * R1 / (R1^2 * 1/(w^2 * C1^2))
(where w = 2*pi*F, as usual)

and if I try plugging in various values, I find that 3.2K
indeed gives the maximum Pd. If this is wrong, please
tell me where the error is. It would also help if
you could say what the value for R1 should be, rather
than the 3.2K I calculate.

> The impedance of the capacitor is 0 -j3200. The impedance of
> the resistor is 3200 -j0 (or 3200 +j0, if you prefer). The
magnitudes

> of the impedance are the same in both cases, but one is totally
> reactive; the other is totally resistive. To get maximum power
transfer,
> you need a _conjugate_ match, which requires an impedance of 0 +j3200
> in series with the capacitor.

Correct, if "impedance matching" was my goal with R1. But
my intent with R1 is to find the best resistance value,
not the matched impedance value, and then to compare it
with an identical "antenna" which has an added inductor
to create resonance. I'll go fix my incorrect "impedance
matching" wording on the webpage.

> It just happens that this is the condition
> for resonance. Since the real part of the "source" impedance is zero,
> maximum power transfer also requires that the load resistor be made
> equal to zero.

Oops! Ooops! max power at ZERO ohms?

> Unfortunately, it takes infinite current to produce any
> power dissipation in a zero ohm resistor, but that's a
> minor detail.

This is wrong. Power goes DOWN if I reduce R2
below 320K. If I reduce the value of R2, then the
voltage across it becomes less, and the current climbs
towards a maximum value set by Ca/2 being in series with
with 100V. When R2 reaches 0 ohms, then the current
through R2 reaches 100/(wCa/2), but a finite current
through a zero ohm resistor gives zero power. I
calculate the power in R2 to be:

Pd = V^2 * R2 / (R2^2 * 1/(w^2 * (Ca/2)^2))

...which gives ~320K at max Pd, the same result
I find if I set R2 = 1/w(Ca/2) Please feel free to
verify for yourself that I'm not making big mistakes.

> There is nothing new or magic about small antennas containing
> high Q matching (or resonating, if you prefer) circuits.

So you agree that the calculated power ratio of 100:1
between the two antennas on the webpage is correct?

Do you also agree that the e-field near the C2 plates
is far stronger than the e-field near the plates of C1?
Or am I mistaken about this strong e-field?

> Please go and build the best energy sucking antenna you can, and then
> tell us if there is anything about its performance that is not
> consistent with long-established circuit and antenna theories.

I'll get to that later, after I'm sure that there are no fatal flaws in http://www.amasci.com/tesla/nearfld1.html, and I hear some agreement about what the "long established theories" actually predict. Do they say something radically different than what I'm saying on the webpage?

The stuff on that website is DEAD SIMPLE. If the 100:1 difference in energy is wrong, and if the large voltage and e-field associated with the C2 plates is wrong, then somebody who knows simple AC circuitry should be able to point out the glaring errors.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2102. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <QCjA4.8501$511.2171070@tw11.nn.bcandid.com>
Source record: 62407

In article <38d11de6.17351799@news.mindspring.com>,
dvmcguire@mindspring.comï¿½ says...
>
>I was just at the Charlotte hamfest, and didn't see some things I
>needed. So, I thought, maybe I can build one of the items.

This is just a thought. Just simply mail order the MFJ dry dummy load. It won't spill, it is lighter and takes up less room, and it has an excellent VSWR acceptance at least up to 450 mhz. I have owned several cantennas, and I like the MFJ dry load much better. Also, I built a 100:1 voltage tap into mine to drive my tek 2215 scope for monitoring rigs under repair.
73 Gummi

2103. Re: Back issues of QST

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1703000037590001@dialup-264.hip.cam.org>
Source record: 62408

In article <38d12ae5.6165741@news.online.no>, LA8AK@Online.NO wrote:

> On Thu, 16 Mar 2000 10:45:45 GMT, knox_k_NOBS@nemaine.com (Ken Knox
> (N1JRO)) wrote:
>
> >On Wed, 15 Mar 2000 23:11:49 GMT, LA8AK@online.no (J M Noeding) wrote:
> >
> >>I am not a member of ARRL, but receive old issues from a club, is it
> >>some way I could find index for my old QST's in the period 1980-1996
> >>
> >>73 jan-martin
> >>LA8AK
> >
> >Hi Jan-Martin.
> >
> >Indexes for 1989 thru 1998 are available online at:
> >
> >http://oak.oakland.edu/pub/hamradio/arrl/infoserv/qst/
> >
> >Ken (N1JRO)
>
> mni tnx to both of you
>
> 73 jan-martin

I'll put this here because it might also be useful. There's a cumulative
index of Ham Radio magazine at:
Linkname: ham radio magazine index : 1968 - 1990
URL: http://webhome.idirect.com/~griffith/hrindex.htm

I'm not sure if he typed it in himself, or got the information from
elsewhere. A few times I've looked for an article I knew existed,
but couldn't find it. On the other hand, it's broken up into topics,
and I may not have looked in the correct topic.

I have a fuzzy memory of there being some official index for Ham
Radio or perhaps Communications Quarterly, but not only do I not
remember the details, I'm not even sure if I really read about such
a thing. Right now, I'm not going to try a search.

Michael VE2BVW

2104. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8asicq$t3p$1@nnrp1.deja.com>
Source record: 62409
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In article <n913dscnh72cds7hkulqgr6finsavf4ean@4ax.com>,
James Meyer <notjimbob@earthlink.net> wrote:
> On 15 Mar 2000 15:49:12 GMT, billb@eskimo.com (William Beaty) wrote:
>
> For just a moment, forget you ever saw C1 and R1. Take a look at the
> tuned circuit.
>
> If R2 were made infinite, then the voltage across C2 should increase
to
> become equal to the voltage applied to the large plates.
>
> With no voltage across either Ca, then there would be no current
through
> either Ca and no power could be transferred from the generator to the
infinite
> valued R2.
>
> If R2 were made zero Ohms, there would be no voltage across C2 and no
> power could be transferred to the zero valued R2.
>
> For some particular value of R2 in between zero and infinity, a
maximum
> amount of energy is transferred from the generator to R2.
>
> That's all obvious to me and probably to you as well. There is a
single
> particular value for R2 that maximizes the power transferred to it.
>

I agree 100% with all of the above. Do you agree with the
actual numbers I came up with? (The resistances, and
the 100:1 difference in power between R1 and R2?)

> Removing L1 changes the particular value of R2 that results in maximum
> power being transferred.
> The "interesting" thing is not that adding an inductor
> improves the power by 100 times, it's the fact that removing the
inductor
> *reduces* the maximum available power by 100 times.

You could look at it that way, if you intentionally wanted
to make it seem uninteresting. That's no fun, and if
there are any interesting implications to explore, we will
be persuaded to abandon the search before we've seen

them.

And of course you can look at it MY way if you
intentionally want to make it interesting! :)

Another "interesting" thing: when C2 and L1 are tuned to
resonance, the voltage across the small C2 antenna plates
suddenly becomes very large. Unless my calculations are
wrong, it grows to 70 volts instead of 0.7v. And the
e-field in the vicinity of the C2 plates grows as well,
of course. We don't see a large voltage with C1 and R1,
and we don't see a large voltage when the resonant circuit
is tuned away from 500KHz. We don't see large e-fields
in the space between the big metal plates EXCEPT
around the small antenna which is tuned to resonance.

It's ALMOST as if the C2-L2 circuit had become a
signal generator, and was getting energy from somewhere
in order to power itself. Which of course is exactly the
case: some of the energy received by the C2 plates builds
up within the resonant circuit, and rather than finding
only a tiny 0.7v on the plates (as with the C1 R1
antenna,) instead we find a large voltage suddenly
appearing across the small plates when we get the
tuning just right.

> In the case of EM waves, free space, a vacuum, has an impedance of
> around 370 Ohms, IIRC. Any resistor inserted in an EM field other
than one with
> a value of 370 Ohms intercepts less power than one matched to the
impedance of
> free space.

Right, and we can understand this in terms of resistive
"space cloth," which makes an ideal absorber if it has a
resistance of 377 ohms per square. (I think I got that
value right.) A huge sheet of this "cloth" will absorb EM
radiation without reflecting it. However, what if our
piece of "space cloth" is shaped like a disk, and the
diameter is far smaller than the wavelength being absorbed?
In that case it no longer works very well. The piece of
cloth has started to behave like a tiny aperture, and
EM waves usually refuse to go through holes which are
far smaller than one wavelength.

Is the size of an aperature merely a question of impedance
matching? Changing the resistance of the tiny piece of
"space cloth" doesn't fix the problem when its diameter
is far smaller than 1/4 wavelength. Electrically short
antennas have the same trouble. They act like physically
tiny aperatures, and it doesn't matter what sort of
resistance is placed within the "hole". If the "hole" is

too small, the EM waves cannot go in. Unless...

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2105. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$wgyjrf$zu7@gw.ihg.com>
Source record: 62410
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist <bbeaty@microscan.com> wrote in message
news:8asfd1$r6s$1@nnrp1.deja.com...
> In article <38D17DDB.F3910B4A@mlecmn.net>,
> Lyle Koehler <lyle@mlecmn.net> wrote:
> > Science Hobbyist wrote:
> >
> > > What is wrong with the math or conclusions on
> > > http://www.amasci.com/tesla/nearfld1.html ?
> > > You've said that there are errors on that website.
> > > What are they? I honestly want to know.
> >
> > Quoting directly from your web site:
> >
> > "To adjust R1 for maximum energy (matched impedance), we set R1 equal
> to
> > the series reactance created by
> > the voltage divider, which is 1/(2*pi*f*100pF) or approximately 3.2K
> > ohms."
> >
> > This statement reflects a complete misunderstanding of impedance
> > matching.
>
> No, it means that I should change the wording because
> you're right, "matched impedance" does not describe
> what I'm trying to do by adjusting R1. I'm trying to
> find the BEST RESISTANCE VALUE for R1: the value that
> gives the highest power that a purely resistive load can
> attain in this situation. I understood that Pd max
> for a resistor in a simple series RC circuit occurs
> when R1 = 1/(wC). Maybe this is wrong.
> Let's see...
>
> If I calculate Pd for R1, and seeing that Ca << C1, I
> get:
>
> Pd = 100^2 * R1 / (R1^2 * 1/(w^2 * C1^2))
> (where w = 2*pi*F, as usual)
>
> and if I try plugging in various values, I find that 3.2K
> indeed gives the maximum Pd. If this is wrong, please

Looks good from a distance. Haven't got close enough to confirm beyond
doubt though.

> my intent with R1 is to find the best resistance value,

Best meaning that which causes maximum power dissipation.

> not the matched impedance value, and then to compare it
> with an identical "antenna" which has an added inductor
> to create resonance. I'll go fix my incorrect "impedance
> matching" wording on the webpage.

Yeah, but if you add an inductor, the previously computed R1 isn't going to be best any more since you've upset the above formula.

> > It just happens that this is the condition
> > for resonance. Since the real part of the "source" impedance is zero,
> > maximum power transfer also requires that the load resistor be made
> > equal to zero.
>
> Oops! Ooops! max power at ZERO ohms?

Yes perfectly reasonable. If your source impedance is exactly zero ohms resistive, then the max power theorem says that you have to have a 0 ohm load to get max power transfer. Of course this doesn't happen, it's just one end point of the graph of the power transfer equation. Note that it's also the infinite power end since any voltage at all on a zero ohm load gives infinite current and hence infinite power. The other end of the graph says if you have infinite source resistance, you need infinite load resistance to get maximum power. But since that "maximum" power transferred would be zero watts, it really doesn't matter what the load resistance is...

> > Unfortunately, it takes infinite current to produce any
> > power dissipation in a zero ohm resistor, but that's a
> > minor detail.
>
> This is wrong.

No it's not! In fact, it's equivalent to the statement that it takes infinite current to get any voltage drop across a 0 ohm resistor. That statement above is referring to any load in general, not in your circuit. Power in a resistor is current squared times resistance. If R is zero, the ONLY way power is going to be non-zero is if current squared is infinite. And that means infinite current.

Fortunately, it only takes a very small (nearly, but not quite infinitely small) voltage across a 0 ohm resistor to produce this infininte current. Since current is V on R. If R is zero, and V is ANYTHING OTHER THAN zero, then the current must be infinite! So now all we need to do is define a 1microvolt infinite current power supply, and we can dissipate (lots, hell infinite) power in the zero ohm load!!

We're not arguing EM physics now, we're losing sight of ohms law. Better be REAL careful now...

> Power goes DOWN if I reduce R2

In your circuit yes. That's because the Current goes down if you reduce R2.

> below 320K. If I reduce the value of R2, then the
> voltage across it becomes less, and the current climbs
> towards a maximum value set by Ca/2 being in series with

There's the difference. Your circuit is current limited, the other guy's
isn't.

> with 100V. When R2 reaches 0 ohms, then the current
> through R2 reaches 100/(wCa/2), but a finite current
> through a zero ohm resistor gives zero power. I
> calculate the power in R2 to be:
>
> Pd = V^2 * R2 / (R2^2 * 1/(w^2 * (Ca/2)^2))
>
> ...which gives ~320K at max Pd, the same result
> I find if I set R2 = 1/w(Ca/2) Please feel free to
> verify for yourself that I'm not making big mistakes.
>
> > There is nothing new or magic about small antennas containing
> > high Q matching (or resonating, if you prefer) circuits.
>
> So you agree that the calculated power ratio of 100:1
> between the two antennas on the webpage is correct?

Sounds good... As long as it's still not more power than the impinging EM
wave that's hitting the antenna there's nothing wrong with this either.
It just means your putting more of the available power into he load instead
of (re)radiating it into space.

> Do you also agree that the e-field near the C2 plates
> is far stronger than the e-field near the plates of C1?
> Or am I mistaken about this strong e-field?

Pass. As I say, from a distance it sort of looks OK.

David.

2106. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1703000051320001@dialup-264.hip.cam.org>
Source record: 62411

In article <38d11bef.2335063@news.online.no>, LA8AK@Online.NO wrote:
> [stuff deleted]
> an important point when writing an index is to add key-words, I might
> check through those QST's I have, but it seems difficult
>
> 73 jan-martin
> LA8AK

I suppose a lot of indexes date from a time when you'd be looking through it by sight, and we're probably lucky that they've made it to electronic form. New material will migrate easily, because it starts out in electronic form, but older items require the effort and time to do the transition.

Every time something exotic comes up here, like the third method of SSB generation or synchronous detection, I am tempted to post extended bibliographies on the topic. The problem is, finding the articles that I remember, and then typing in the details. I never quite get around to it. But in some ways the idea is valid, and probably more useful than looking at old indexes. It would be cross-over magazine lines, which sometimes publishers aren't so happy about doing. And if you've seen an article, an index might help you remember which particular issue it was, but a mere title may not tell you what's in the article. For instance, the Drake SPR-4 receiver had a forward biased diode for it's AM detector, which is somewhat unique and fits this topic of fancier AM detectors, but the only way I know that is from a review in QST (December 1970) that has a schematic of the detector.

And one could actually but in some detail, rather than just have a list of pertinent articles. I have quite a file of articles about grid dip oscillators, and those are just from the magazines I've taken apart, and most of the articles resemble most of the other ones. There isn't much point in listing them all, other than increasing the chances that someone might have an article on building a GDO. But there are some articles that stand out, either because they were particularly informative, or because the design was unique for some reason. Annotating such an bibliography would be useful.

Michael VE2BVW

2107. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8asnrokl1@nnrp1.deja.com>
Source record: 62412
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <newscache$wgyjrf$zu7@gw.ihg.com>,
"David Emrich" <demrich@ihgtech.com.au> wrote:

> We're not arguing EM physics now, we're losing sight of ohms law.
Better be
> REAL careful now...

No, we are discussing the circuits on that webpage, and
whether they are wrong or not. If somebody claims that
the power in R1 or R2 goes to infinity when the resistance
value is set to zero, then that claim is wrong. There
is a series impedance between the power supply and
the resistors.

> > Power goes DOWN if I reduce R2
>
> In your circuit yes. That's because the Current goes down if you
reduce R2.
>
> > below 320K. If I reduce the value of R2, then the
> > voltage across it becomes less, and the current climbs
> > towards a maximum value set by Ca/2 being in series with
>
> There's the difference. Your circuit is current limited, the other
guy's
> isn't.

What other guy's circuit? The circuits in question are
at http://www.amasci.com/tesla/nearfld1.html

If R1 or R2 go to zero, no infinite current flows, and
the power in those resistors goes to zero. No other
circuits are being discussed.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
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Sent via Deja.com http://www.deja.com/
Before you buy.

2108. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <c1t3ds4imedbrkumtcdojbbk9ln8n79pd7@4ax.com>
Source record: 62413
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

On Fri, 17 Mar 2000 06:12:43 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

>James Meyer <notjimbob@earthlink.net> wrote:
>>
>> For some particular value of R2 in between zero and infinity, a
>maximum
>> amount of energy is transferred from the generator to R2.
>
> I agree 100% with all of the above. Do you agree with the
> actual numbers I came up with? (The resistances, and
> the 100:1 difference in power between R1 and R2?)

Makes no difference in understanding what's going on. I'll accept your
figure.

> You could look at it that way, if you intentionally wanted
> to make it seem uninteresting. That's no fun, and if
> there are any interesting implications to explore, we will
> be persuaded to abandon the search before we've seen
> them.

I'm more concerned with making it "true" than I am with making it
"interesting". Not that it can't be both at the same time in some cases, of
course.

If there are any implications to discover, they will be just as apparent
from a carefully considered examination without the hype as they will be
otherwise. You could have made a similar comparison in which the power ratio
would have been 1,000 to 1. Making it 1,000 instead of 100 doesn't make it any
more interesting if you understand what's going on.

> Another "interesting" thing: when C2 and L1 are tuned to
> resonance, the voltage across the small C2 antenna plates
> suddenly becomes very large. Unless my calculations are
> wrong, it grows to 70 volts instead of 0.7v. And the
> e-field in the vicinity of the C2 plates grows as well,
> of course. We don't see a large voltage with C1 and R1,
> and we don't see a large voltage when the resonant circuit
> is tuned away from 500KHz. We don't see large e-fields
> in the space between the big metal plates EXCEPT
> around the small antenna which is tuned to resonance.

True, the e-field between the large plates is disturbed more when a
resonant device is inserted in the field. That e-field disturbance doesn't mean
that more energy is somehow created though.

> It's ALMOST as if the C2-L2 circuit had become a
> signal generator, and was getting energy from somewhere
> in order to power itself.

That's a leap of faith or wishful thinking. All the energy delivered to the resonant circuit comes from the generator attached to the big plates. Do the math for the current and power supplied by the generator and you will see that the differences in the power supplied to the resonant and non-resonant circuits are supplied by the generator.

> Is the size of an aperature merely a question of impedance
> matching? Changing the resistance of the tiny piece of
> "space cloth" doesn't fix the problem when its diameter
> is far smaller than 1/4 wavelength. Electrically short
> antennas have the same trouble. They act like physically
> tiny aperatures, and it doesn't matter what sort of
> resistance is placed within the "hole". If the "hole" is
> too small, the EM waves cannot go in. Unless...

Unless you take quantum mechanics into consideration. The smaller you make something, the less sure you can be of its size and/or position in space. It's called the uncertainty principle and it's been thoroughly investigated and "proven".

Single photons presented one at a time to the classical two-slit diffraction experiment *still* produce interference patterns although there are no other photons present to interfere with.

Now *that's* interesting. But it's still not a convincing argument for zero-point energy or a vindication of Tesla's crack-pot schemes.

Jim

2109. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d43dd.bio.root@radioactivex.lebesque-al.net>
Source record: 62414
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>In article <slrn8d1o4e.bio.root@radioactivex.lebesque-al.net>,
>davids@david15.dallas.nationwide.net wrote:
>> > The tuned circuit in http://www.amasci.com/tesla/nearfld1.html
>> > causes more energy to be available to the load resistor.
>> > It's not simply a bandpass filter; there are some
>> > energy effects here.
>>
>> This is part of your misunderstanding.
>
> What is wrong with the math or conclusions on
> http://www.amasci.com/tesla/nearfld1.html ?
>
> You've said that there are errors on that website.
> What are they? I honestly want to know.

It's in your understanding of what you calculated, but since
I haven't made it clear, I'm trying to figure out a way to
make it more obvious.

2110. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D20A75.92DE9693@webaxs.net>
Source record: 62415
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

The very simple error is your calculation of 320kohms for the
resonant case. The real answer is infinity kohms (ie: bigger
is better).

The resonant network is an inverse impedance transformer, so
the higher the load resistance, the lower the resistance
presented to the source.

At resonance, the source sees a pure resistance. Because the
source is a constant voltage type, then obviously more power
is delivered by minimizing the resistance presented to the
source (hence higher load resistance).

The tradeoff is that the Q gets higher, so bandwidth is lower.
If the center freq=1kHz, and Q=10000, the response time to step
changes in the transmitter level is a time-constant of 3.183s,
ie:quite sluggish.

As you can imagine, the entire system is engulfed in the resonant
condition.

Loop antennas are limited by losses in themselves, and objects near
them.

There is nothing strange or unknown in these resonance effects or
calculations; i use and think about them frequently.

You will realize all these effects are present and used when designing
narrow bandpass filters from lightly coupled hi-Q resonators.

Science Hobbyist wrote:
>
> I'm holding off on discussing my ideas, and instead looking
> for something very simple: major errors on the website:
>
> http://www.amasci.com/tesla/nearfld1.html
>
> If they are there, I cannot see them, but perhaps
> somebody here will see things I miss.
>
> --

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *

* email: russell@webaxs.net *
* Australia *
****

2111. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38D208E9.A0E6F6EE@nospam.gecm.com>
Source record: 62416
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Science Hobbyist wrote:

> Are you saying that there are no major errors on
> http://www.amasci.com/tesla/nearfld1.html ?
>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

No

2112. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38D20AD7.8B47D60C@nospam.gecm.com>
Source record: 62417
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Science Hobbyist wrote:

>
> Are you saying that there are no major errors on
> http://www.amasci.com/tesla/nearfld1.html ?
>
> --

I've had a quick look at the reference and it is correct but I don't see any controversy - it's a restatement of something well known. Tuning a small antenna is just conjugate-matching its source impedance. If the source is R+jX the load has to be R-jX for maximum power transfer. That's general for any circuit.
Alan

2113. Request help to finding NJ 88C40 DIP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Sergiy Garbuza <garbuza@fh-heilbronn.de>
Message-ID: <38D20EAC.9912B0C@fh-heilbronn.de>
Source record: 62418

Hello all,
We are looking for old electronik components :

PLL Synthesitor
Fa.Plessey (GEC)
{bought by Mitel}
NJ 88C40 DIP

If you have this component we can buy it or if you find it in another
place, please send us a information conserning this detail.
Thanks beforehand.
regards,

Sergiy Garbuza
Savenko Elena lena@fh-heilbronn.de

2114. Heathkit RF Gen IG-102

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Tom Turnbull <Tom.Turnbull@durham.ac.uk>
Message-ID: <8at9e9kpq1@sirius.dur.ac.uk>
Source record: 62419
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.basics

I've been given a Heathkit RF Sig Gen IG-102 which is a little worse for wear.

It should have two valves but one is missing and the other is broken. Lots of shards of glass inside the case. From the bits I have been able to piece together I think it may have been an ECC81.

Someone has also been desoldering some of the capacitors inside, whether to try some sort of repair or to rob them for a project I can't say. I don't think any are missing just disconnected at one end. Otherwise all the coils appear to be in place - I should say I can't see where any are missing. The power supply appears OK.

Can anyone let me know what the valves should be and is there a schematic available anywhere on the WEB for this?

Tom.

--
Tom Turnbull
University of Durham
Information Technology Service
Telephone: 0191 374 2884
FAX: 0191 374 7759
email: Tom.Turnbull@durham.ac.uk

2115. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <8atcuo$f6o$1@nnrp1.deja.com>
Source record: 62420

In article <xwzw4.463$F7.11436@ptah.visi.com>,
"Ron H" <rnharsh@visi.com> wrote:
> I am planning a new amp and noticed that most of the newer designs do
not
> use inductive chokes in the high voltage supply. Back when I learned
about
> such things a filter choke was considered essential for good hum
filtering
> with variable (keyed) loads..... What's the story? Should I use a
choke or
> go with the newer design (and cheaper) and use only caps????

Hello Ron,

Like so many things, the answer is "it depends". Here's the story:

There are two basic types of power supply filter: Capacitor-input and choke-input - named for the first element after the rectifier. The filter consisting of just a capacitor is the simplest type of capacitor-input filter.

The pros and cons of the two types are listed below. Vrms is the transformer secondary voltage:

Choke input:
- Choke must be at least "critical inductance"
- Output voltage cannot exceed 0.9 Vrms
- Peak rectifier current is only a few times the average, and can be reduced by making choke larger, which also improves filtering
- Good filtering possible with relatively small values of L and C
- Good regulation if a choke with low DC resistance is used
- Good power factor
- Low turn-on surge

Capacitor input:
- No choke needed in some designs
- Output voltage can reach 1.4 Vrms if capacitor is big enough
- Peak rectifier current is several times the average, and is increased by making the input capacitor larger to improve filtering.
- Good filtering requires large C if only C is used
- Good regulation only if large C is used. Poorer regulation than choke input in most cases.
- Poor power factor
- High turn-on surge

In the old days, choke-input ruled supreme for several reasons. The most important reason was the limitations of vacuum and mercury vapor rectifiers - they could not tolerate the large peak-to-average curren ratios of capacitor input filters when used in high power applications. In addition, the only practical capacitors for high power applications were paper-oil type, which are expensive to make and large in size. And a good power factor helped avoid blinking the lights too badly. Finally, in those days the cost of winding chokes and transformers was not that high, so the minimum cost solution involved a lot of iron.

The invention of high voltage silicon rectifiers and "computer grade" electrolytic capacitors changed the game in the 1960s and 1970s. Capacitor values that would have been physically and economically impractical with the old paper-oil caps were possible with strings of the new electrolytics. And cilicon rectifiers of adequate rating could handle the large peak currents. Light blinking and poor power factor were less of a concern as more hams' homes were wired for 100, 150 and 200 amp service, instead of the old 60 amp services that were common before 1960 or so.

The end result is that, today, you get to pick which way to go. The determining factor to most homebrewing hams now is "what parts do I have/can get?" You can go the "modern" way with silicon rectifiers and a capacitor bank (you need lots of MFD's, though), or the "old" way with either tube or silicon rectifiers, a suitable input choke, and a much smaller capacitor.

Complete design info is available in the ARRL Radio Amateur's Handbook. Trouble is, if you want the info on choke-input, you have to look at an older edition. It's all pretty simple, though.

Any more questions? I can describe the whole design process, but this post is long enough as it is.

I run a pair of 866As into a choke input filter for my homebrew rig. Great regulation, low power factor, smooooooooooooth DC. Sure it's big and heavy, but the parts cost me pennies at hamfests. And the MV flash is always nice to look at. 'Specially at 3 AM on Field Day.

73 de Jim, N2EY
--
FISTS #4360
BIT #0001

Sent via Deja.com http://www.deja.com/
Before you buy.

2116. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <kT+sSwA+uh04Ews0@jmwa.demon.co.uk>
Source record: 62421
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8asnrokl1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
> If somebody claims that
> the power in R1 or R2 goes to infinity when the resistance
> value is set to zero, then that claim is wrong. There
> is a series impedance between the power supply and
> the resistors.

Irrespective of the series impedance, the cases of zero and infinite
resistance are just the bounds of the mathematics and are, in the
present context, complete red herrings.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2117. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8atistdjg1@neptunium.btinternet.com>
Source record: 62422
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Lyle, a nice logical explanation !

Maximum power transfer theorems and conjugate matches were known well before the advent of radio, in the telegraph and telephone era. They are so obvious the early engineers didn't even bother to give them a name.

More recent generations, especially the amateur radio fraternity, like to give titles to their arguments - all belligerents feel the need for banners to fight under.

Reg.

2118. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38d25842.3968166@news.azstarnet.com>
Source record: 62423

On Fri, 17 Mar 2000 13:46:01 GMT, n2ey@aol.com wrote:

>In article <xwzw4.463$F7.11436@ptah.visi.com>,
>"Ron H" <rnharsh@visi.com> wrote:
>> I am planning a new amp and noticed that most of the newer designs do
>not
>> use inductive chokes in the high voltage supply. Back when I learned
>about
>> such things a filter choke was considered essential for good hum
>filtering
>> with variable (keyed) loads..... What's the story? Should I use a
>choke or
>> go with the newer design (and cheaper) and use only caps????
>
>Hello Ron,
>
>Like so many things, the answer is "it depends". Here's the story:
>
>There are two basic types of power supply filter: Capacitor-input and
>choke-input - named for the first element after the rectifier. The
>filter consisting of just a capacitor is the simplest type of capacitor-
>input filter.
>
>The pros and cons of the two types are listed below. Vrms is the
>transformer secondary voltage:
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>Choke input:
>- Choke must be at least "critical inductance"
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>reduced by making choke larger, which also improves filtering
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>- Good regulation if a choke with low DC resistance is used
>- Good power factor
>- Low turn-on surge
>
>Capacitor input:
>- No choke needed in some designs
>- Output voltage can reach 1.4 Vrms if capacitor is big enough
>- Peak rectifier current is several times the average, and is increased
>by making the input capacitor larger to improve filtering.
>- Good filtering requires large C if only C is used
>- Good regulation only if large C is used. Poorer regulation than choke
>input in most cases.

>- Poor power factor
>- High turn-on surge
>
>In the old days, choke-input ruled supreme for several reasons. The
>most important reason was the limitations of vacuum and mercury vapor
>rectifiers - they could not tolerate the large peak-to-average curren
>ratios of capacitor input filters when used in high power applications.
>In addition, the only practical capacitors for high power applications
>were paper-oil type, which are expensive to make and large in size. And
>a good power factor helped avoid blinking the lights too badly.
>Finally, in those days the cost of winding chokes and transformers was
>not that high, so the minimum cost solution involved a lot of iron.
>
>The invention of high voltage silicon rectifiers and "computer grade"
>electrolytic capacitors changed the game in the 1960s and 1970s.
>Capacitor values that would have been physically and economically
>impractical with the old paper-oil caps were possible with strings of
>the new electrolytics. And cilicon rectifiers of adequate rating could
>handle the large peak currents. Light blinking and poor power factor
>were less of a concern as more hams' homes were wired for 100, 150 and
>200 amp service, instead of the old 60 amp services that were common
>before 1960 or so.
>
>The end result is that, today, you get to pick which way to go. The
>determining factor to most homebrewing hams now is "what parts do I
>have/can get?" You can go the "modern" way with silicon rectifiers and
>a capacitor bank (you need lots of MFD's, though), or the "old" way
>with either tube or silicon rectifiers, a suitable input choke, and a
>much smaller capacitor.
>
>Complete design info is available in the ARRL Radio Amateur's Handbook.
>Trouble is, if you want the info on choke-input, you have to look at an
>older edition. It's all pretty simple, though.
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>Any more questions? I can describe the whole design process, but this
>post is long enough as it is.
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>I run a pair of 866As into a choke input filter for my homebrew rig.
>Great regulation, low power factor, smooooooooooooth DC. Sure it's big
>and heavy, but the parts cost me pennies at hamfests. And the MV flash
>is always nice to look at. 'Specially at 3 AM on Field Day.
>
>73 de Jim, N2EY
>--

All excellent info! I would just add that normally to maintain regulation with a choke input filter, a certain minimum quiescent current through the choke is required. (While the current is below the critical value, the supply acts as a capacitor input filter) This usually requires a bleeder resistance value much lower than that required for safety. There are (were) "swinging chokes" that

varied their inductance in such a way as to minimize the required bleeder current. These chokes had a air gap which increase the inductance at lower current and let the choke saturate at higher currents.

Another way to lessen the bleeder current is to parallel resonate the choke at the ripple frequency.

To paraphrase Jim, you pays your money, you makes your choice. I have two supplies, one the factory supply for my Drake L4B. It has a fairly modern transformer, silicon rectifiers and a stack of electrolytic capacitors. DImensions are about 8" x 8" x 11".

My other supply has two surplus transformers, primaries in series on 240 VAC, secondaries independently bridge-rectified (so phasing isn't critical) and a tuned-choke input with an oil-filled capacitor. Size: 12 1/4" rack panel, 18" deep. Weight about 130 lbs. 3K @ 1A forever.

Which way to go with your new amp? I dunno. If I was thinking about doing a new one, I would seriously look at a high frequency switcher with electronic regulation. But that's a brand new topic.

Regards,

Wes N7WS

2119. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D2655D.D6EA06C3@agilent.com>
Source record: 62424
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:
(lots snipped...)
> What other guy's circuit? The circuits in question are
> at http://www.amasci.com/tesla/nearfld1.html
>
> If R1 or R2 go to zero, no infinite current flows, and
> the power in those resistors goes to zero. No other
> circuits are being discussed.

If you put a speed limiter on a Corvette, it can only go as fast as the speed limiter. It seems, then, very strange to me to be talking about the _Corvette_ when the speed is maxed out by the _limiter_. If you want to talk about the Corvette, remove the artificial boundaries. YOU may not be discussing any other circuits, but there are others here that are discussing the Corvette with the speed limiter removed. It's simply a variation of the same circuit. If you don't want to know how much power you can really get from your model, connecting only to C2's plates, then keep your blinders on.

The comparison of maximizing power with a simple resistive load, then adding an inductor and seeing more power dissipated in the resistor isn't untrue, it's just extremely limited. With your model of C2 as an "antenna," I can very easily (given ideal inductors) get a whole lot MORE power dissipation in a load resistor than the way you suggested. Since the outer large plates are driven with a constant voltage, simply put a ONE ohm resistor in SERIES with an inductor which resonates the source impedance, maximizing resistor current. Now recalculate the load power, and see if it isn't bigger than with your high resistance value. Now drop the load resistance further, retune, and recalculate.

My gosh, it seems that we've discovered that we can "suck" infinite power from this puppy.

If you ever get back around to ANTENNAS instead of CAPACITORS, we'll get to re-introduce some resistance in the source impedance, and THAT will limit the available power.

That's not a direct answer to, "is the web site posting correct or not?" But I'll point out that John Larkin DID raise an issue with it in a posting a couple days ago, repeated below.
Cheers,
Tom

John Larkin wrote:

William,

I think your circuit model is too simplistic. In the no-inductor case, assume Rl is infinite; now reduce C1 (leave the C1 plates the same distance apart, but just reduce their area). Your simple circuit model predicts that the voltage across C1 approaches Vgen as the plates are made smaller, which is clearly not the case. The actual voltage across unloaded C1 is just

Vc1 = Vgen * d / D

where d = separation between C1 plates and D is separation between the big plates. Unloaded C1 degenerates to a pair of electrostatic field probes, irrespective of the plate area.

And why argue? Just build one and try it.

John

2120. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <b6tJ7KAYwj04EwJN@ifwtech.demon.co.uk>
Source record: 62425

Dave Martindale wrote:
>retxeh@blazenet.net writes:
>
>>I have
>>owned several cantennas, and I like the MFJ dry load much better.
>> Also, I built a 100:1 voltage tap into mine to drive my tek 2215
>>scope for monitoring rigs under repair.
>
>What sort of resistors did you use for the 100:1 tap - ordinary
>leaded types or surface mount?
>
>I've been planning to put a 1000:1 ratio tap into one of my dummy
>loads, basically turning the thing into a 60 dB pi-type attenuator.
>I have been thinking of using surface-mount resistors (not likely to
>be inductive), but don't know whether I need to put the resistor
>network itself inside a shield to prevent RF pickup that bypasses
>the resistors.

My experience with making a dummy load into a 30dB attenuator was that the various parts should be shielded.

The T resistor network is particularly good for this, because you're working down at the 'cold' end of the big power resistor. I lifted the cold end and fed a short lead through a partition made from PC board. The shunt resistor to ground consisted of about 10 33-ohm 0.5W resistors arranged like spokes, and grounded with zero lead length on to the shield. Then a single 47-ohm resistor goes through the partition to the output socket, which is at the opposite end from the from the high-power input.

The attenuation was adjusted to exactly 30dB by a friend with a network analyser, who added/changed/subtracted shunt resistors to get it right. The resulting attenuation was very flat, up to at least 100MHz.

You couldn't get this performance with a Pi-attenuator, because of capacitance and inductance in the high-value series resistor (R2) which is also in a higher-impedance location. The T configuration has the advantage that all the shunt resistors are paralleled, so their self-inductances are divided by about 10, and the self-capacitance occurs in a low-impedance location where it doesn't seem to affect broadband performance.

30dB seems to be a kind of magic number, because you can use a standard 50-ohm power resistor without seriously affecting the input match. 20dB would require a special-value power resistor in order to give a good input match. 40dB would require an extremely low shunt resistor in the T

configuration, or a much higher series resistor in a Pi.

That arrangement works well for an air-cooled load, because it requires very little extra length inside an existing enclosure. It would obviously need more engineering to use oil cooling... you certainly wouldn't enjoy converting an existing oily Cantenna!

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.demon.co.uk/g3sek

2121. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <8atvlu$u1n$1@nnrp1.deja.com>
Source record: 62426

In article <38d25842.3968166@news.azstarnet.com>,
n7ws@arrl.net (Wes Stewart) wrote:
> On Fri, 17 Mar 2000 13:46:01 GMT, n2ey@aol.com wrote:
>
> >In article <xwzw4.463$F7.11436@ptah.visi.com>,
> >"Ron H" <rnharsh@visi.com> wrote:
> >> I am planning a new amp and noticed that most of the newer designs
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> >not
> >> use inductive chokes in the high voltage supply. Back when I
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> >> such things a filter choke was considered essential for good hum
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> >> with variable (keyed) loads..... What's the story? Should I use a
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> >> go with the newer design (and cheaper) and use only caps????
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> >Hello Ron,
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> >Like so many things, the answer is "it depends". Here's the story:
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> >There are two basic types of power supply filter: Capacitor-input and
> >choke-input - named for the first element after the rectifier. The
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> >The pros and cons of the two types are listed below. Vrms is the
> >transformer secondary voltage:
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> >Choke input:
> >- Choke must be at least "critical inductance"
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> >- Good filtering possible with relatively small values of L and C
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> >- Low turn-on surge
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> >most important reason was the limitations of vacuum and mercury vapor
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> >ratios of capacitor input filters when used in high power
applications.
> >In addition, the only practical capacitors for high power
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> >were paper-oil type, which are expensive to make and large in size.
And
> >a good power factor helped avoid blinking the lights too badly.
> >Finally, in those days the cost of winding chokes and transformers
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> >not that high, so the minimum cost solution involved a lot of iron.
> >
> >The invention of high voltage silicon rectifiers and "computer grade"
> >electrolytic capacitors changed the game in the 1960s and 1970s.
> >Capacitor values that would have been physically and economically
> >impractical with the old paper-oil caps were possible with strings of
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> >The end result is that, today, you get to pick which way to go. The
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> >Complete design info is available in the ARRL Radio Amateur's
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> >Trouble is, if you want the info on choke-input, you have to look at
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> >older edition. It's all pretty simple, though.
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> >Any more questions? I can describe the whole design process, but this
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> >I run a pair of 866As into a choke input filter for my homebrew rig.
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flash
> >is always nice to look at. 'Specially at 3 AM on Field Day.
> >
> >73 de Jim, N2EY
> >--
>
> All excellent info!

Tnx, Wes.

>I would just add that normally to maintain regulation with
> a choke input filter, a certain minimum quiescent current through the
choke is
> required. (While the current is below the critical value, the supply
acts as a
> capacitor input filter) This usually requires a bleeder resistance
value much
> lower than that required for safety.

Yup. For 60 Hz power and full-wave rectification, the critical inductance works out to be L (in henries) >= Rload (kilohms). In other words, if your bleeder resistor is 20 kilohms, the input choke must be 20 Henries or larger to maintain critical inductance. Note that if your amp runs with any no-signal idling plate current, you can consider that current as part of the bleeder.

> There are (were) "swinging chokes" that
> varied their inductance in such a way as to minimize the required
bleeder
> current. These chokes had a air gap which increase the inductance at
lower
> current and let the choke saturate at higher currents.

All iron core power supply chokes have an airgap to prevent saturation. Smoothing chokes have a wide gap which makes the inductance fairly independent of the current - but you don't get as many henries that way. Swinging chokes use a narrow gap that gives more inductance at low current but less at high current. If you look at old catalogs, the choke manufacturers often made chokes that were essentially identical except that one was smoothing and the other was not. I have a pair of chokes that are the same size, weight, insulation and curent rating, but one is rated 20-4 Hy @ 30-300 mA (swinging choke) and the other is rated 8 Hy @ 0-300 mA (smoothing choke). This is typical of what you can expect.

In the old days it was common to use two filter sections - the first with a swinging choke and the second with a smoothing choke. This permitted the use of quite small filter caps - only a few mfd each. At the time, the cost of choke vs. cap was such that it made sense. Today, a single section is usually used, with more C.

You don't need perfect DC for a high power amp - 1% ripple is better than any mode requires.
>
> Another way to lessen the bleeder current is to parallel resonate the choke at
> the ripple frequency.

Yup, but you have to select the cap and choke to do it, because parts tolerances are pretty wide. The voltage across the choke/cap combo can get pretty high, too, and you want to use a smoothing, not swinging, choke. But it works!

There's one more point about these sort of supplies that bears mentioning. In the old days, manual T/R switching (PTT) was common, while VOX and QSK were not. It was common practice to use a separate plate transformer in the tx and turn off the HV when receiving, thus saving some power. This is practical with choke input, because of the low turn-on surge, but is rough with capacitor input. Most "modern" designs leave the HV on all the time, which wastes power on receive.
>
> To paraphrase Jim, you pays your money, you makes your choice. I have two
> supplies, one the factory supply for my Drake L4B. It has a fairly modern
> transformer, silicon rectifiers and a stack of electrolytic capacitors.
> DImensions are about 8" x 8" x 11".
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> My other supply has two surplus transformers, primaries in series on 240 VAC,
> secondaries independently bridge-rectified (so phasing isn't critical) and a
> tuned-choke input with an oil-filled capacitor. Size: 12 1/4" rack panel, 18"
> deep. Weight about 130 lbs. 3K @ 1A forever.
>

oh mama! Hope it's on wheels!

The stock L4B supply is undersized for full-power high-duty cycle operation of the amp, I am told. Fine for typical SSB, but if you like full-bore RTTY or SSTV, you need something bigger.

> Which way to go with your new amp? I dunno. If I was thinking about doing a new
> one, I would seriously look at a high frequency switcher with electronic

> regulation. But that's a brand new topic.

Yep. And the design/construction of such a supply is much more complex than either of the conventional alternatives. I don't think you'd find the parts for a 3 kV 1 A switching supply at a hamfest...but then again, you never know!

73 de Jim, N2EY
--
FISTS #4360
BIT #0001

Sent via Deja.com http://www.deja.com/
Before you buy.

2122. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38D287DB.7795F98C@clifto.com>
Source record: 62427
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:
> Are you only objecting to my weird "energy sucking"
> language? Or are you also objecting to my assertion that
> a load resistor can run hotter if a tuned circuit
> is part of a short antenna?

I'm getting the impression that you're seeing this as a special property
of resonance. Am I right?

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

2123. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d535q.bio.root@radioactivex.lebesque-al.net>
Source record: 62428
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>In article <38D17DDB.F3910B4A@mlecmn.net>,

> what I'm trying to do by adjusting R1. I'm trying to
> find the BEST RESISTANCE VALUE for R1: the value that
> gives the highest power that a purely resistive load can
> attain in this situation. I understood that Pd max
> for a resistor in a simple series RC circuit occurs
> when R1 = 1/(wC). Maybe this is wrong.
> Let's see...

The Point is, that that value is NOT the same as the energy flux incident on the antenna. The power in the load is a result of how well you TRANSFER the POWER (also, don't equate voltage with power either) from the antenna to the load. Your circuit description ignores the fact that you arent capable of taking advantage of the full potential difference across the plates in the first case. Why? Because, for any frequency of oscillation, and any non-zero resistance, you will never be able to get all of the charge developed on the plates, which is also forms the current flowing through R, to flow through R before the the polarity of the voltage changes and hence, the sign of the charge induced on the plates changes. Insteaf of using the term resonance, just look at how much current flows.

Also, there is no advantage whatsoever to using the external capacitor and then going to the effort of calling your circuit a voltage divider leaving you with 2 capacitors in series with a resistor and capacitor in parallel. For any number of reasons such as it's always possible to separate the plates by an arbitrarily large distance so that the the capacitance -> 0 while keeping the voltage constant, so that the capacitance can be made arbitrarily small, and of no consequence while leaving the plates at any desired voltage with whatever time dependendence you want. I think I know where you are trying to go with this and are going to claim this feature is crucial, but it isn't and it only obfuscates the the physics. So, you can treat the circuit as having a voltage source attached to each plate, since that's what will appear from the charges induced by the E-field.

Then, the current flow into any junction = the flow out, so the current from the capacitor = the current through the resistor. The charge on the capacitor is q=cv, which gives you a current of i = c(dv/dt) and if the i through the resistor is v/r, v/r + c(dv/dt) = 0 -> dv/v = -rc dt and v(t) = v0 exp(-t/rc). The current is just i(t) = v(t)/r. If you are at 0 volts between the plates and you apply v0 across them, it will take infinitely long for the energy stored in the field of the capacitor due

to v0 to drive the charge to the other plate and therefore through the
If you try to apply the same voltage, but swap polarities, you need to
remove the leftover charges in addition to supplying enough new charge
to establish the ful potential difference. So, the current that would
have been dissapated in the resistor if it were left there does not
and cannot contribute to the power the resistor dissapates. After a
time t = RC, the voltage is down by 1/e and if 1/f is about equal to
that, you should be able to understand where the power goes. If, you
now consider the case V = Vo sin(wt) from q(t) = C v(t) you get
q(t) = C Vo cos(wt) and i = -Vo(wC) sin(wt). Through the resistor, the
voltage difference must be the same and the current is i = Vo cos(t).
Therefore, since the total current flowing into (or out from) a junction
must sum to zero, you get (at any point):

i(t) = wC *Vo sin(wt) + (Vo/R) cos(wt) = 0

Since sin(wt) is Im exp(jwt) and cos(wt) is the Re part,
and j = exp(j*pi/2), I can rewrite this as:

i = Re(jwC + 1/R)Vo exp(jwt)

You can see that it is never possible to make all of the current flow
through the load resistor. The current is divided between the two
in proportion to the phase angle between them. That has to be 0
for the resistor to receive all of the current and hence, dissipate
the energy.

What happens in your second picture where there is now an inductor
in parallel? Well, the Voltage is still the same, but is divided between
all three. Since the current through the inductor is given through the
relation, V = Vo cos(wt) (-L)(di/dt), you get:

i = (Vo/wL) sin(wt)

This is the Re part of (-Vo/jwL) exp(jwt). So all three give you:

i = Re [(jwC - 1/wL) + (1/R)]Vo exp(jwt)

You can apparently make all of the current appear in the resistor
by a careful choice for L,C and w. Why does this happen? Because
the energy that the resistor would normally not have available,
is stored by the inductor. Since neither an inductor or capacitor
dissipates energy, that "missing energy" in the first case is
no longer "missing"

> indeed gives the maximum Pd. If this is wrong, please
> tell me where the error is. It would also help if
> you could say what the value for R1 should be, rather
> than the 3.2K I calculate.
>
But the reason it's a maximum is NOT because that's all that
was there. It's maximized because there is no way to make
that phase angle 0 if C is mot zero and no inductor is present.

The imaginary part of the impedance corresonds to stored and
UNAVAILABLE energy that is added and removed by the souce
as the voltage cycles. That requirement that 1/wc = R is
because if 1/wc is very large, the impedance is low and
R doesn't recive a large fraction of the current so P=IV
is small, If R is very small, then the power the resistor can
dissipate is small (recall a perfect short dissipates no
power at all). The number you have calculated is just the
maximum of the the expression for the power dissipated,
not the total energy of the system.

> my intent with R1 is to find the best resistance value,
> not the matched impedance value, and then to compare it
> with an identical "antenna" which has an added inductor
> to create resonance. I'll go fix my incorrect "impedance
> matching" wording on the webpage.
>
But, they aren't identical antennas in that case! The
matching is crucial to TRANSFER the energy to your
resistor rather than re-radiate it. That's what an
impedance mismatch and reflection are - the energy
that's available but cant be removed from the system.
Energy is conserved by re-radiating that which you

>
> Pd = V^2 * R2 / (R2^2 * 1/(w^2 * (Ca/2)^2))
>
> ...which gives ~320K at max Pd, the same result
> I find if I set R2 = 1/w(Ca/2) Please feel free to
> verify for yourself that I'm not making big mistakes.

Sure. The function has a minimum. But that corresponds
only to the Re part. You aren't working with all of the
current when you do that.

> So you agree that the calculated power ratio of 100:1
> between the two antennas on the webpage is correct?

It doesn't matter. If you made a mistake, correcting
it only will give you the same type of disparity
at a 10:1 or 1000:1 or whatever. The point is, that's
nothing but an impedance issue that prevents you from
removing the energy available to the system through
that resistor. It isn't the total energy there.

> Do you also agree that the e-field near the C2 plates
> is far stronger than the e-field near the plates of C1?
> Or am I mistaken about this strong e-field?
>
The relationship between the E fields is and always has been
in such a configuration, dependent upon the sum of the separate
fields. If the plates are connected so that the top of the

inner is connected to the top outer and the same for
the two bottom plates, the E-field will be higher between
the plates on the inner capacitor. If on the other hand,
the two inner plates are shorted, the field between the plates
of the inner cap will always be 0. If they are left to float
the fields will bee the same between the inner plates as
anywhere else within the larger cap. If you tie the plates
together with resistors, capacitors and inductors, then
the result is still determined explicitly, but now you
are storing the energy in other components. As to which is
stronger in your specific question, why does it matter?
You can make them turn out however you like by choosing the
components.

> The stuff on that website is DEAD SIMPLE. If the 100:1
> difference in energy is wrong, and if the large voltage
> and e-field associated with the C2 plates is wrong, then
> somebody who knows simple AC circuitry should be able to
> point out the glaring errors.
>

And it doesnt relate to an antenna. You got ahead of yourself.
You have to interperet this first. You've already skipped to
measuring fields before deciding what they should be. If you
now calculate the fields, you wont find any difference in
that and what a measurement should yield and will. You are
exchanging cause and effect. The field around the antenna is
a superposition of the incoming and re-radiated fields, just
like holding a mirror up redirects the light. For the same
reason, even.

2124. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D28E05.6B8D596F@mlecmn.net>
Source record: 62429
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>

> and if I try plugging in various values, I find that 3.2K
> indeed gives the maximum Pd. If this is wrong, please
> tell me where the error is. It would also help if
> you could say what the value for R1 should be, rather
> than the 3.2K I calculate.

An R value of 3.2k gives the maximum Pd in your simple series R-C
circuit. But nobody who wants to maximize power transfer would use a
simple R-C circuit. They would use a conjugate matching network instead.
>

>
> Correct, if "impedance matching" was my goal with R1. But
> my intent with R1 is to find the best resistance value,
> not the matched impedance value, and then to compare it
> with an identical "antenna" which has an added inductor
> to create resonance. I'll go fix my incorrect "impedance
> matching" wording on the webpage.

But what is the significance of this initial circuit, other than to show
that if you use the wrong matching network, you can easily improve upon
it?
>
> > It just happens that this is the condition
> > for resonance. Since the real part of the "source" impedance is zero,
> > maximum power transfer also requires that the load resistor be made
> > equal to zero.
>
> Oops! Ooops! max power at ZERO ohms?

I should have stated that load resistor would be placed in series with
the inductor, not in parallel with it. The complex (that is, involving
real and imaginary numbers) expression for a series circuit impedance is
immediately obvious; for a parallel circuit it is not. That's why I
think in terms of series circuits whenever possible. Because your source
impedance is zero, it should be possible to extract _any_ desired power
from the source by allowing the load resistance to go toward zero (with
the resistor in series with the inductor) or toward infinity (with the
resistor in parallel as shown in your circuit).
>

>
> This is wrong. Power goes DOWN if I reduce R2
> below 320K. If I reduce the value of R2, then the
> voltage across it becomes less, and the current climbs
> towards a maximum value set by Ca/2 being in series with
> with 100V. When R2 reaches 0 ohms, then the current
> through R2 reaches 100/(wCa/2), but a finite current
> through a zero ohm resistor gives zero power. I
> calculate the power in R2 to be:
>
> Pd = V^2 * R2 / (R2^2 * 1/(w^2 * (Ca/2)^2))
>
> ...which gives ~320K at max Pd, the same result
> I find if I set R2 = 1/w(Ca/2) Please feel free to
> verify for yourself that I'm not making big mistakes.

The power calculation is probably correct for the condition where the L and C in parallel with the resistor form a parallel resonant circuit, because as you point out, the parallel L-C network has an infinite impedance, leaving only your 320k resistor and Ca, the 1 pF capacitor. But that is not the condition for maximum power transfer!! You are only getting 16 milliwatts out of your circuit, compared to a theoretical maximum of infinity. For maximum power transfer, you need resonance in the _entire_ network, including capacitor Ca. This is fairly easy to do. Simply increase the value of L1 a tiny bit beyond what it takes to resonate with C2. This makes the L1-C2 combination look like a very large inductor, and by choosing the correct value, it now resonates with Ca to form a voltage-multiplying circuit. Black magic -- it's now possible to get more than 100 volts across R! In fact, with your 320k resistor in the circuit and a slight amount of retuning, you can extract considerably more than your calculated 16 milliwatts. Increase R to 100 megohms, and you can get about 20 watts. (Unfortunately you need components with a Q of over 30,000 to do this.) The math needed to arrive at the numbers I've quoted is conventional but tedious; I cheated and used a circuit analysis program (MicroSim) to solve the equations.

> So you agree that the calculated power ratio of 100:1
> between the two antennas on the webpage is correct?

Yes, it's true for your example, but as Tom Bruhns has pointed out, your "matching" circuit is like putting a speed limiter on a Corvette. It's possible to do much better than the numbers in your example if the circuit is truly matched.

>
> Do you also agree that the e-field near the C2 plates
> is far stronger than the e-field near the plates of C1?
> Or am I mistaken about this strong e-field?
>

Yes, there can be a very strong e-field in the vicinity of C1 if circuit Q is high and things are tuned correctly.
--

Lyle, K0LR

http://www.computerpro.com/~lyle

2125. Re: 80 meter loop

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Cedric Baelemans <cedric.baelemans@advalvas.be>
Message-ID: <8au5ni$k5q$1@newnews1.news.nl.uu.net>
Source record: 62430

Try one of these links

http://www.iri.tudelft.nl/~geurink/magnloop.htm
http://ourworld.compuserve.com/homepages/drcp/magloop2.htm
http://home.swbell.net/aa5tb/loop.html

73

Cedric
ON4CKM

BUJIAJ8 <bujiaj8@aol.com> wrote in message
news:20000314205111.02476.00002321@ng-ca1.aol.com...
> I want to build a 80 meter loop... so ... does anyone know of good
websites for
> information on loop antennas.?/ pls email
>
> bill

2126. Recvrs & Xmitter & Bug

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: TDLW <thelma@hawk.igs.net>
Message-ID: <8au9h0$4vq$1@news.igs.net>
Source record: 62431

For Sale Hallicrafters S-85 Receiver
Trio 9R-59DG "

Collins 32V-3 Xmitter

Vibroplex "Bug" This is an original...not an import
copy...immaculate
condition...looks like it was never used.
If interested in any of these iitems. Please "reply to
author" for more
info. Location is east of Ottawa Ontario

2127. N1IR AND FRACTAL QUAD YAGI--THIS WEEKEND!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000317170329.17333.00005058@ng-xe1.aol.com>
Source record: 62432

I'm happy to report that Chip (the ol' man himself) will be on this weekend on 10M with the Fractal Quad Yagi, working Europeans. He will be on about 1300 UTC somewhere in or near about 28490 to 28500 KHz. He will try (but no promises) to get on both days of the weekend so take a listen to see how that lil' fractal antenna plays! Usually he stays on an hour or so.

Background info can be found on the ham page on

http://www.fractenna.com

Chip's fractal antenna work has appeared in RadCom, Practical Wireless, World Radio News, 73, Communications Quarterly, Radio Revisita, Monitoring Times, QTC, Scientific American, Discover, Science et Vie, and many other magazines.

Hear and work the latest innovation to the world of antennas from Chip himself:-)

73
Phil
de N1ZKT

2128. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d25fbe.85241845@news.online.no>
Source record: 62433

not sure where you got it from that capacitor input means "no choke"
This is rather simplified, and just not true

but as you say "id depends"
yes, it depends whether you have a pi-type filter or just a capacitor

If we do not deal with swinging chokes, I vote for the capacitor input
filter since it has higher efficiency than only capacitor filter, see
explanation above

Jan-Martin
LA8AK

On Fri, 17 Mar 2000 13:46:01 GMT, n2ey@aol.com wrote:

>Hello Ron,
>
>Like so many things, the answer is "it depends". Here's the story:
>
>There are two basic types of power supply filter: Capacitor-input and
>choke-input - named for the first element after the rectifier. The
>filter consisting of just a capacitor is the simplest type of capacitor-
>input filter.
>
>The pros and cons of the two types are listed below. Vrms is the
>transformer secondary voltage:
>
>Choke input:
>- Choke must be at least "critical inductance"
>- Output voltage cannot exceed 0.9 Vrms
>- Peak rectifier current is only a few times the average, and can be
>reduced by making choke larger, which also improves filtering
>- Good filtering possible with relatively small values of L and C
>- Good regulation if a choke with low DC resistance is used
>- Good power factor
>- Low turn-on surge
>
>Capacitor input:
>- No choke needed in some designs
>- Output voltage can reach 1.4 Vrms if capacitor is big enough
>- Peak rectifier current is several times the average, and is increased
>by making the input capacitor larger to improve filtering.
>- Good filtering requires large C if only C is used
>- Good regulation only if large C is used. Poorer regulation than choke
>input in most cases.
>- Poor power factor

>- High turn-on surge
>
>In the old days, choke-input ruled supreme for several reasons. The
>most important reason was the limitations of vacuum and mercury vapor
>rectifiers - they could not tolerate the large peak-to-average curren
>ratios of capacitor input filters when used in high power applications.
>In addition, the only practical capacitors for high power applications
>were paper-oil type, which are expensive to make and large in size. And
>a good power factor helped avoid blinking the lights too badly.
>Finally, in those days the cost of winding chokes and transformers was
>not that high, so the minimum cost solution involved a lot of iron.
>
>The invention of high voltage silicon rectifiers and "computer grade"
>electrolytic capacitors changed the game in the 1960s and 1970s.
>Capacitor values that would have been physically and economically
>impractical with the old paper-oil caps were possible with strings of
>the new electrolytics. And cilicon rectifiers of adequate rating could
>handle the large peak currents. Light blinking and poor power factor
>were less of a concern as more hams' homes were wired for 100, 150 and
>200 amp service, instead of the old 60 amp services that were common
>before 1960 or so.
>
>The end result is that, today, you get to pick which way to go. The
>determining factor to most homebrewing hams now is "what parts do I
>have/can get?" You can go the "modern" way with silicon rectifiers and
>a capacitor bank (you need lots of MFD's, though), or the "old" way
>with either tube or silicon rectifiers, a suitable input choke, and a
>much smaller capacitor.
>
>Complete design info is available in the ARRL Radio Amateur's Handbook.
>Trouble is, if you want the info on choke-input, you have to look at an
>older edition. It's all pretty simple, though.
>
>Any more questions? I can describe the whole design process, but this
>post is long enough as it is.
>
>I run a pair of 866As into a choke input filter for my homebrew rig.
>Great regulation, low power factor, smooooooooooooth DC. Sure it's big
>and heavy, but the parts cost me pennies at hamfests. And the MV flash
>is always nice to look at. 'Specially at 3 AM on Field Day.
>
>73 de Jim, N2EY
>--
>FISTS #4360
>BIT #0001
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

2129. P8002 Power FET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Chris Price <chris@g4agj.co.uk>
Message-ID: <k8yA4.1021$r93.29624@news2-win.server.ntlworld.com>
Source record: 62434

I am looking for a number of P8002 power fets (or their equivalent) sourced in the UK. Can anybody help please?

chris@g4agj.co.uk

Chris G4AGJ

2130. Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: "James C. Garland" <4cx250b@miavx1.muohio.edu>
Message-ID: <38D2D9AC.922AC7CD@miavx1.muohio.edu>
Source record: 62435
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Anybody got one or two of these? I"m gettin' desperate!

73,

Jim W8ZR

2131. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: john <w4thqNOw4SPAM@msn.com.invalid>
Message-ID: <0d0e4f40.ba748fa3@usw-ex0106-047.remarq.com>
Source record: 62436
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I may have several but I'll have to dig through a few boxes
tomaorrow. 73, John W4THQ

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2132. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38D2F411.DBF31EB5@xprint.ca>
Source record: 62437
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Gary Coffman wrote:

> Anthropomorphic principle. Nature is the way it is because if it were different,
> we couldn't be here to observe it. In other words, we can imagine a universe
> with different laws, but we couldn't live in it because it couldn't support human
> life.
>

I always thought the "anthropomorphic principle" explained
why people tend to resemble their pets. ;-)

The Anthropic Principle has its own website:
http://www.anthropic-principle.com/

J.Legris
change the x to s to reply

2133. Re: "Cantenna" design...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8av5pijag1@newcastle.cs.ubc.ca>
Source record: 62438

"Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk> writes:

>The T resistor network is particularly good for this, because you're
>working down at the 'cold' end of the big power resistor. I lifted the
>cold end and fed a short lead through a partition made from PC board.
>The shunt resistor to ground consisted of about 10 33-ohm 0.5W resistors
>arranged like spokes, and grounded with zero lead length on to the
>shield. Then a single 47-ohm resistor goes through the partition to the
>output socket, which is at the opposite end from the from the high-power
>input.

That's an interesting idea. With the dummy load I was planning to use,
there isn't really much room to "float" the ground end of the power
resistor - mechanical tolerances are pretty tight. There is room
to "tap" the hot end easily, which is why I was thinking about a pi
network. But I do have a different load where it would be easier to
get access to the ground end of the resistor.

>You couldn't get this performance with a Pi-attenuator, because of
>capacitance and inductance in the high-value series resistor (R2) which
>is also in a higher-impedance location.

I was planning to use surface-mount resistors, to minimize capacitance
and inductance - probably 2 10k in series, in series with 2 more 10k
in parallel for a total of 25k.

>30dB seems to be a kind of magic number, because you can use a standard
>50-ohm power resistor without seriously affecting the input match. 20dB
>would require a special-value power resistor in order to give a good
>input match. 40dB would require an extremely low shunt resistor in the T
>configuration, or a much higher series resistor in a Pi.

40 dB needs a 1 ohm resistor for the shunt. That should be doable
with 10 10R surface-mount resistors. With 50 W in, they need to
dissipate 1/10 W each, which seems plausible.

Dave

2134. FA Transco "Y" SP4T--One Day Remaining

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: John Klewer <n6ax@pacbell.net>
Message-ID: <38D2FC5C.3EC2BE91@pacbell.net>
Source record: 62439
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur,antenna,rec.radio.amateur.space

Transco model Y single pole 4 position relay, N connectors on ebay ends tomorrow morning

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=281961565

Thanks

2135. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-17 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$xg4prf$ctd@gw.ihg.com>
Source record: 62440
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist <bbeaty@microscan.com> wrote in message
news:8asfd1$r6s$1@nnrp1.deja.com...
> In article <38D17DDB.F3910B4A@mlecmn.net>,
> Lyle Koehler <lyle@mlecmn.net> wrote:
> > Science Hobbyist wrote:
> >
> > > What is wrong with the math or conclusions on
> > > http://www.amasci.com/tesla/nearfld1.html ?
> > > You've said that there are errors on that website.
> > > What are they? I honestly want to know.
> >
> > Quoting directly from your web site:
> >
> > "To adjust R1 for maximum energy (matched impedance), we set R1 equal
> to
> > the series reactance created by
> > the voltage divider, which is 1/(2*pi*f*100pF) or approximately 3.2K
> > ohms."
> >
> > This statement reflects a complete misunderstanding of impedance
> > matching.
>
> No, it means that I should change the wording because
> you're right, "matched impedance" does not describe
> what I'm trying to do by adjusting R1. I'm trying to
> find the BEST RESISTANCE VALUE for R1: the value that
> gives the highest power that a purely resistive load can
> attain in this situation. I understood that Pd max
> for a resistor in a simple series RC circuit occurs
> when R1 = 1/(wC). Maybe this is wrong.
> Let's see...
>
> If I calculate Pd for R1, and seeing that Ca << C1, I
> get:
>
> Pd = 100^2 * R1 / (R1^2 * 1/(w^2 * C1^2))
> (where w = 2*pi*F, as usual)
>
> and if I try plugging in various values, I find that 3.2K
> indeed gives the maximum Pd. If this is wrong, please

Looks good from a distance. Haven't got close enough to confirm beyond
doubt though.

> my intent with R1 is to find the best resistance value,

Best meaning that which causes maximum power dissipation.

> not the matched impedance value, and then to compare it
> with an identical "antenna" which has an added inductor
> to create resonance. I'll go fix my incorrect "impedance
> matching" wording on the webpage.

Yeah, but if you add an inductor, the previously computed R1 isn't going to be best any more since you've upset the above formula.

> > It just happens that this is the condition
> > for resonance. Since the real part of the "source" impedance is zero,
> > maximum power transfer also requires that the load resistor be made
> > equal to zero.
>
> Oops! Ooops! max power at ZERO ohms?

Yes perfectly reasonable. If your source impedance is exactly zero ohms resistive, then the max power theorem says that you have to have a 0 ohm load to get max power transfer. Of course this doesn't happen, it's just one end point of the graph of the power transfer equation. Note that it's also the infinite power end since any voltage at all on a zero ohm load gives infinite current and hence infinite power. The other end of the graph says if you have infinite source resistance, you need infinite load resistance to get maximum power. But since that "maximum" power transferred would be zero watts, it really doesn't matter what the load resistance is...

> > Unfortunately, it takes infinite current to produce any
> > power dissipation in a zero ohm resistor, but that's a
> > minor detail.
>
> This is wrong.

No it's not! In fact, it's equivalent to the statement that it takes infinite current to get any voltage drop across a 0 ohm resistor. That statement above is referring to any load in general, not in your circuit. Power in a resistor is current squared times resistance. If R is zero, the ONLY way power is going to be non-zero is if current squared is infinite. And that means infinite current.

Fortunately, it only takes a very small (nearly, but not quite infinitely small) voltage across a 0 ohm resistor to produce this infininte current. Since current is V on R. If R is zero, and V is ANYTHING OTHER THAN zero, then the current must be infinite! So now all we need to do is define a 1microvolt infinite current power supply, and we can dissipate (lots, hell infinite) power in the zero ohm load!!

We're not arguing EM physics now, we're losing sight of ohms law. Better be REAL careful now...

> Power goes DOWN if I reduce R2

In your circuit yes. That's because the Current goes down if you reduce R2.

> below 320K. If I reduce the value of R2, then the
> voltage across it becomes less, and the current climbs
> towards a maximum value set by Ca/2 being in series with

There's the difference. Your circuit is current limited, the other guy's
isn't.

> with 100V. When R2 reaches 0 ohms, then the current
> through R2 reaches 100/(wCa/2), but a finite current
> through a zero ohm resistor gives zero power. I
> calculate the power in R2 to be:
>
> Pd = V^2 * R2 / (R2^2 * 1/(w^2 * (Ca/2)^2))
>
> ...which gives ~320K at max Pd, the same result
> I find if I set R2 = 1/w(Ca/2) Please feel free to
> verify for yourself that I'm not making big mistakes.
>
> > There is nothing new or magic about small antennas containing
> > high Q matching (or resonating, if you prefer) circuits.
>
> So you agree that the calculated power ratio of 100:1
> between the two antennas on the webpage is correct?

Sounds good... As long as it's still not more power than the impinging EM
wave that's hitting the antenna there's nothing wrong with this either.
It just means your putting more of the available power into he load instead
of (re)radiating it into space.

> Do you also agree that the e-field near the C2 plates
> is far stronger than the e-field near the plates of C1?
> Or am I mistaken about this strong e-field?

Pass. As I say, from a distance it sort of looks OK.

David.

2136. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38d2edc3.2751716@news.mindspring.com>
Source record: 62295
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Try Murph's Surplus in CA. They have a web page and I think I saw
some nixie tubes there last week.

Russ

"James C. Garland" <4cx250b@miavx1.muohio.edu> wrote:

> Anybody got one or two of these? I"m gettin' desperate!
>
>73,
>
>Jim W8ZR
>

Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2137. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8autgojgu1@nnrp1.deja.com>
Source record: 62296
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <38D20A75.92DE9693@webaxs.net>,
russell shaw <russell@webaxs.net> wrote:
> The very simple error is your calculation of 320kohms for the
> resonant case. The real answer is infinity kohms (ie: bigger
> is better).

I think I see now.

Instead of being limited to 100V, the voltage across the
(lossless) inductor will rise towards infinity, right?
Put a large resistance across the parallel LC circuit
(or a much smaller resistance in series), and you can
extract as much energy as you want. In theory.

> The resonant network is an inverse impedance transformer, so
> the higher the load resistance, the lower the resistance
> presented to the source.

Cool! I hadn't looked at it that way.

> At resonance, the source sees a pure resistance. Because the
> source is a constant voltage type, then obviously more power
> is delivered by minimizing the resistance presented to the
> source (hence higher load resistance).
>
> The tradeoff is that the Q gets higher, so bandwidth is lower.
> If the center freq=1kHz, and Q=10000, the response time to step
> changes in the transmitter level is a time-constant of 3.183s,
> ie:quite sluggish.

And the pounds of copper and ferrite in the inductor
would be enormous, no? Or the inductor would have
to be superconducting or something.

> There is nothing strange or unknown in these resonance effects or
> calculations; i use and think about them frequently.
> --
> **
> * Russell Shaw, B.Eng, M.Eng(Research) *
> * Electronics Consultant *
> * email: russell@webaxs.net *
> * Australia *
> **
>

That's what I thought. The increased power in the load attached to the resonant antenna is a familiar principle. (This says nothing about practical considerations for extracting huge energy flows, of course.)

The next question: What happens if we remove the large metal driver-plates shown in that article, and instead place this electrically small, lossless resonant antenna a few tens of KM away from a 500KHz CW radio station? Orient the capacitor/dipole for best reception, of course.

Doesn't a similar effect arise with EM waves? Or does it only work with the capacitive coupling I've shown? Does the effect vanish if the e-field is part of a propagating EM wave?

I'm under the impression that the small resonant antenna can intercept energy from throughout its surrounding nearfield region (a spherical volume of approximately 1/pi wavelengths in diameter.) At 500KHz, the small antenna, if it was built from lossless components, could behave as if it was about 200 meters across. No? And it would "become" even larger at VLF?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2138. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8auv1ekeq1@nnrp1.deja.com>
Source record: 62297
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <GVbSOApdMjO7cAgPZlybYLo4U97D@4ax.com>,
John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
> On Fri, 17 Mar 2000 07:16:01 GMT, Science Hobbyist
> <bbeaty@microscan.com> wrote:
> |
> | I'm a mere student, and have no hope of guessing what this
> | gedanken experiment might be. If you cannot defend your
> | earlier comments, I must assume that my rebuttal stands.
>
> You can certainly assume anything that pleases you. But physics
> is a matter of reality, not of opinion or fantasy.

Obviously. There is no fantasy involved. The stuff
on http://www.amasci.com/tesla/nearfld1.html is basic
physics, and it is clearly labled as a simplified model.
The components are assumed to be lossless. I'm asking
whether R2 gets more power than R1 IN PRINCIPLE. In
practice, with the inductor's resistance lowering the
Q of the resonator, things may be very different. But
first things first. I want to explore the predictions
made by conventional circuit theory about these circuit
elements, if lossless components are used.

> If you cannot understand
> why the C1 voltage is independent of plate size, then you should work
> on fundamentals
> before proceeding to revolutionize the economy of the
> world with breakthrough physics.

OK, you say that there is a flaw in that webpage article,
in the part involving R1 and C1.

Does this flaw alter my conclusion that the power in R2
is much higher than the power in R1? If the problem you
found is fixed, how does it impact the equations?

And most important, does it alter my conclusion that the
presence of a resonator can increase the power available
to a load resistor?

> But I'll offer a hint: Slit each of the capacitor plates in half and
> analyze what happens. You may slit them on any axis.

I'm not willing to play this gussing game. If you've
discovered that the power in R2 should not be greater than

the power in R1, please demonstrate this. If you cannot,
then I shall assume that my conclusion about the increased
power in R2 have not yet been proven incorrect.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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Before you buy.

2139. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8av1apltn1@nnrp1.deja.com>
Source record: 62298
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <sV7SON9tydV0gZbo5XkatFOthfo3@4ax.com>,
John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
> On Fri, 17 Mar 2000 08:24:07 -0800, Tom Carlson <extol@ix.netcom.com>
> wrote:

> Tom,
>
> You should have a look at the rest of his website. The basic premise
> is that space is nonlinear with respect to EM effects, so it becomes
> possible to build an antenna that reaches out beyond its physical
> extent to suck up power over a large volume. Think about the
> implications of that one. This capacitance thing is just the camel's
> nose under the tent.

I believe that the real problem involves my explanation. My
explanation might very well be incorrect, yet the phenomenon
in question still is real. Unfortunately, the folks on
sci.physics.electromag, in order to "stop me" or something,
are distorting physics itself, and trying to say that
the conclusions on http://www.amasci.com/tesla/nearfld1.html
go against physical law. I am moved to ask: who presents
the greater "danger" to physics, those like me who excitedly
discover interesting aspects and then explain it WRONG, or
those who conveniently alter it as needed, whenever they
wish to "defend" it against threats?

I am here to root out my errors. I suspect that the same is
not true of everyone here.

If my conclusions depicted on
http://www.amasci.com/tesla/nearfld1.html
are correct, obviously this DOES NOT MEAN that my explanation
on other parts of my website is correct. I cannot use
the nearfld1.html article to "prove" my explanation, I can
only use it to demonstrate the reality of the phenomenon I'm
trying hard to explain to myself.

Can an electrically small antenna intercept much more
energy when it has a resonator, than if it does not? Simple
question. And contrary to those who loudly insist that
the answer is not interesting, I think that it is.

> I assume that I'm the 'asshole' you refer to. Well, I'm always willing
> to help people - when I can - if they are sincere; but when an
> admitted amateur proposes to entirely remake the physical sciences in

> general and Maxwell's equations in particular, without having done any
> of the basic homework, and challenges us to help him, I am somehow
> less sympathetic. Reminds me of the 'Flavored Coffee Guy', a sad case
> indeed.

There are two separate issues here:

1. Does the phenomenon exist? Do electrically small
dipole or loop antennas, if they are part of a high-Q
resonator, allow interception of more power than if the
resonator is not present?

2. Is Bill Beaty's explanation of this effect a load
of crap?

The answer to #1 is not totally clear as yet. When applied
to the e-field between a pair of metal plates, it appears
that a resonant antenna DOES work far better than one
without a resonator. (There was an error on my webpage,
but it involved L1 and C2, and it caused me to vastly
UNDER-estimate the theoretical limits on power. My
100:1 ratio was wrong. It is much, much higher.)

The next stage is to remove the metal plates and replace
them with the e-field which is part of some propagating EM
waves coming from a distant transmitter. If this is done,
does R1, the resistor attached to the resonant antenna,
still get more power than R2? I believe the answer is
yes. Is the limit on the R2 power still at infinity?
Obviously not. Instead, I understand that the tiny
resonant antenna can only intercept EM energy in a
spherical region around itself, where the diameter of the
sphere is the nearfield region of that antenna, or roughly
1/pi wavelengths. (Notice that I'm not trying to explain
why this is so at this point. I only state that it occurs.
Well, if lossless components are used, it would occur.)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
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2140. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: phil <philpr@ozemail.com.au>
Message-ID: <dGDA4.51060$3b6.209329@ozemail.com.au>
Source record: 62299
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

So what imnpedance does the antenna present before and after you throw the load across it.

I strongly suspect that you will find that this is pretty damn important, and explains your problem understanding how much energy the antenna is able to deliver.

William Beaty wrote in message <8aobdo$uh2$1@eskinews.eskimo.com>...
>[Article crossposted from sci.physics.electromag]
>[Author was Science Hobbyist]
>[Posted on Wed, 15 Mar 2000 01:49:31 GMT]
>
> I've put together a little website about the simple ideas
> which underlie the "energy sucking" concept. These DO
> NOT involve EM travelling waves and distant transmitters,
> but instead focus only upon simple circuits. If we
> can't come to agreement about this simple circuit, then
> there's no point in arguing about "energy sucking"
> antennas and waves in space.
>
> Simple capacitive "antennas"
> http://www.amasci.com/tesla/nearfld1.html
>
> On the other hand, if the above circuit proves to have
> a fundamental flaw, then "energy sucking antennas"
> probably has the same flaw. The clearer I can make
> the ideas, the more robust they become, but also the
> easier it is to find any big holes.
>
>--
>((((((((((((((((((((((((O)))))))))))))))))))))))
>William Beaty bbeaty@microscan.com
>Software Engineer http://www.microscan.com
>Microscan Inc., Renton, WA 425-226-5700 x1135
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.
>--
>((((((((((((((((((((((((O)))))))))))))))))))))))
>William J. Beaty SCIENCE HOBBYIST website
>billb@eskimo.com http://www.amasci.com
>EE/programmer/sci-exhibits science projects, tesla, weird science

2141. Re: "energy sucking" simplified ? --> It aint that easy.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: phil <philpr@ozemail.com.au>
Message-ID: <MKDA4.51061$3b6.209234@ozemail.com.au>
Source record: 62300
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

I see no inclusion in your analysis of the impedance of your antenna and load.

The effect of this is non trivial, and has a fundamental effect on bopth the antenna, its effective size and I suspect your "problem" with understanding what is going on in your postulated problem.

I suggest that you get a decent book on antennas and have a read, antenna behaviour analysis does not respond well to simplification unless it is very carefully thought out.

William Beaty wrote in message <8aobdo$uh2$1@eskinews.eskimo.com>...
>[Article crossposted from sci.physics.electromag]
>[Author was Science Hobbyist]
>[Posted on Wed, 15 Mar 2000 01:49:31 GMT]
>
> I've put together a little website about the simple ideas
> which underlie the "energy sucking" concept. These DO
> NOT involve EM travelling waves and distant transmitters,
> but instead focus only upon simple circuits. If we
> can't come to agreement about this simple circuit, then
> there's no point in arguing about "energy sucking"
> antennas and waves in space.

2142. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1803000005400001@dialup-270.hip.cam.org>
Source record: 62301

In article <38d12574.4771764@news.online.no>, LA8AK@Online.NO wrote:

>[stuff deleted]
> One problem with the complete circuit is that 455khz VCO may spread
> signal back into the receiver and cause more or less interference. The
> amount of problem depends on which receiver you use, but don't imagine
> adding this circuit to a BC-radio.
>
> LA7MI solved this problem 20 years ago using 910kHz VCO for his add-on
> used with FRG-7. I wished to copy it, but had problems because he used
> only discrete components - had to invert connections to a ringmixer if
> it didn't lock, but when loop gain is low it may or may not lock, so I
> reversed the connections some times and resigned. It would be an idea
> to improve the old circuit using modern devices, but I do not really
> listen to AM broadcast much any more, Radio Luxembourg is closed
> several years ago but I don't know about BBC Radio 1.....
>
> If some interest, I could look for LA7MI's circuit and scan it.
>
> 73
> jan-martin
> LA8AK

Someone pointed out some months back that you need to double the
incoming signal and lock to that if you are trying to demodulate
DSB with no carrier (or I suppose AM where the carrier has been lost
along the way). I'd seen circuits that that, but until that post
I hadn't quite figured out the point. Could that be the reason
for a 910KHz VCO? If you have to divide the VCO by two to get
a 455KHz signal, surely there is as much chance for the signal
to bet back into the IF strip than if you started with a 455KHz VCO.

There was an article in Ham Radio back in the 70s by Henry S. Keen
that had something along this lines, but I can't remember the details
and it would take too long to find it. Either he came up with a phase
detector that locked on the harmonic, come to think of it, all analog
phase detectors will do that, or he had some scheme where the VCO
at twice the IF provided the carrier without division. I
guess I should try to find that article.

And the Drake R-8 receiver has a synchronous detector where the VCO
runs at twice the IF. The circuit is in Communications Quarterly for
Fall 1992. It looks like a complicated circuit, because there's switching
so the circuit works on CW/SSB, but it uses an MC1496 as the balanced
modulator. The incoming signal is also doubled, and it feeds a 4046 PLL

running at twice the IF. A CMOS divider brings the VCO signal down
to the IF frequency, where it feeds the 1496.

You're right that there isn't often a lot of use for fancy AM detectors,
but nevertheless it is interesting. For most of the time radio has
been around, a simple diode detector has been the demodulator for AM.
Yes, synchronous detectors were around for a long time, CQ had one
complete with a phasing network for selectable sideband back in the fifties,
and QST had an article in 1964, but in the days of tubes they were too
bulky to be useful. Then, as AM was fading out for communication work,
semiconductors came along and allowed fancier techniques. But it's only
been the past ten to fifteen years that "sychronous detectors" have
been commonly known, mainly because a lot of shortwave receivers
have them now.

Even beyond synchronous and quasi-synchronous detectors, there are
possibilities for better AM detectors. Bias a diode so it can better
deal with small voltage levels. Or put the diode in the loop of an
op-amp, That's not a new idea, but nowadays there are op-amps that
can better deal with IF frequencies than in the days of the 741.

So while there may not be a lot of reason for a better AM detector,
the process of exploring alternatives to the simple diode detectors
may have value that can't be defined.

Michael VE2BVW

2143. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8av568ohi1@nnrp1.deja.com>
Source record: 62302
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <slrn8d535q.bio.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
>
> >In article <38D17DDB.F3910B4A@mlecmn.net>,
>
> > what I'm trying to do by adjusting R1. I'm trying to
> > find the BEST RESISTANCE VALUE for R1: the value that
> > gives the highest power that a purely resistive load can
> > attain in this situation. I understood that Pd max
> > for a resistor in a simple series RC circuit occurs
> > when R1 = 1/(wC). Maybe this is wrong.
> > Let's see...
>
> The Point is, that that value is NOT the same as the energy flux inci-
> dent on the antenna.

Obviously. Notice that I'm not asserting anything about
energy flux at this point. I'm only trying to cut through
the complexity and get a straight answer: does the power
in R2 exceed the power in R1? Is the e-field near the
C2 plates stronger than the e-field at the same position
near C1? If some people in this thread say "NO!", then I'd
like to hear their arguments.

Do you accept that the power in R2 is higher, in the situation
depicted on http://www.amasci.com/tesla/nearfld1.html ?

If you give me a clear answer to this simple question,
then we can go on to other issues. Or if you're sick of the
whole thing, I can continue the discussion with others
who can still stomache it. :)

> Also, there is no advantage whatsoever to using the external capacitor
> and then going to the effort of calling your circuit a voltage divider
> leaving you with 2 capacitors in series with a resistor and capacitor
> in parallel. For any number of reasons such as it's always possible to
> separate the plates by an arbitrarily large distance so that the the
> capacitance -> 0 while keeping the voltage constant, so that the
> capacitance can be made arbitrarily small, and of no consequence while
> leaving the plates at any desired voltage with whatever time depend-
> endence you want.

I'm not doing any of the things above, or discussing such
things. I'm only discussing the circuits on that webpage,
and whether R2 has higher power than R1. My intent is to

place a simplified model of an antenna in an e-field
which is generated by a power supply, then to add a
resonator and see what difference it makes.

Any changes made to my capacitor-plates setup can only
serve to sow doubt and confusion. I choose to pursue
simplicity instead, and therefore to keep my capacitor-
plates setup just as it is.

> I think I know where you are trying to go with this
> and are going to claim this feature is crucial, but it isn't and it
> only obfuscates the the physics.

Notice that I'm not claiming anything yet. I'm only
asking some simple questions.

> The imaginary part of the impedance corresonds to stored and
> UNAVAILABLE energy that is added and removed by the souce
> as the voltage cycles. That requirement that 1/wc = R is
> because if 1/wc is very large, the impedance is low and
> R doesn't recive a large fraction of the current so P=IV
> is small, If R is very small, then the power the resistor can
> dissipate is small (recall a perfect short dissipates no
> power at all). The number you have calculated is just the
> maximum of the the expression for the power dissipated,
> not the total energy of the system.

I'm not yet discussing the details of this system. I'm
only looking for some agreement on whether the power in
R2 is significantly higher than the power in R1.

> > my intent with R1 is to find the best resistance value,
> > not the matched impedance value, and then to compare it
> > with an identical "antenna" which has an added inductor
> > to create resonance. I'll go fix my incorrect "impedance
> > matching" wording on the webpage.
> >
> But, they aren't identical antennas in that case!

By "antenna" in the above, I mean the metal
plates C1 or C2. These later can serve as a simplified
model of an electrically short dipole antenna, and C1 and
C2 must be identical, in order that I can see what effect
the presence of L1 has, when tuned to resonance.

But first I want to know, does R2 run hotter than R1,
and is the e-field near C2 stronger than the e-field
near C1?

> > So you agree that the calculated power ratio of 100:1
> > between the two antennas on the webpage is correct?
>
> It doesn't matter. If you made a mistake, correcting

> it only will give you the same type of disparity
> at a 10:1 or 1000:1 or whatever.

I agree. I only want to know if the L1-C2-R2 device
has more power in its load resistor than the C1-R1 device.
I'm not yet discussing why, or yet trying to explain it,
or pursuing implications. I only want to get some agreement
that it actually occurs in the setup that I've shown.

> > Do you also agree that the e-field near the C2 plates
> > is far stronger than the e-field near the plates of C1?
> > Or am I mistaken about this strong e-field?
> >
> The relationship between the E fields is and always has been
> in such a configuration, dependent upon the sum of the separate
> fields. If the plates are connected so that the top of the
> inner is connected to the top outer and the same for
> the two bottom plates, the E-field will be higher between
> the plates on the inner capacitor.

I'm not discussing anything except the two devices
illustrated on http://www.amasci.com/tesla/nearfld1.html,
with no changes made, and with the operating conditions
kept just as I've stated.

Is the strength of the e-field adjacent to the C2
plates far stronger than the e-field in the same
location near the C1 plates?

If on the other hand,
> the two inner plates are shorted, the field between the plates
> of the inner cap will always be 0. If they are left to float
> the fields will bee the same between the inner plates as
> anywhere else within the larger cap. If you tie the plates
> together with resistors, capacitors and inductors, then
> the result is still determined explicitly, but now you
> are storing the energy in other components. As to which is
> stronger in your specific question, why does it matter?
> You can make them turn out however you like by choosing the
> components.

I can make the results of this thought-experiment be
anything I like? That's a good tactic, if my goal was
to "win the fight" rather than to examine some physics.

You are right: I could easily use my expertise in physics
to create illusory complexity in order to sow confusion
and deflect enquiry. It's very useful skill in sci-
newsgroup flamewars where the enemy must be defeated at
any cost. However, it's very damaging when used in a
scientific discussion, where clarity and understanding
are the goals.

If instead the goal is to illuminate concepts, then
extreme simplicity works well. Simplicity allows ideas
to gain their own voices, and they need far less
interpretation.

> > The stuff on that website is DEAD SIMPLE. If the 100:1
> > difference in energy is wrong, and if the large voltage
> > and e-field associated with the C2 plates is wrong, then
> > somebody who knows simple AC circuitry should be able to
> > point out the glaring errors.
>
> And it doesnt relate to an antenna. You got ahead of yourself.
> You have to interperet this first.

Until I hear clear answers to my simple questions, I'm not
relating it to anything. I'm not discussing "energy
sucking antennas" anymore, or any implications of these
circuits, or what occurs in variants of them. I'm
only discussing what happens in the situation as
depicted on http://www.amasci.com/tesla/nearfld1.html

> You've already skipped to
> measuring fields before deciding what they should be. If you
> now calculate the fields, you wont find any difference in
> that and what a measurement should yield and will. You are
> exchanging cause and effect.

I'm doing none of this. I'm asking this question: is the
strength of the e-field adjacent to the C2 plates
much stronger than the e-field adjacent to the C1 plates?
With the circuits and plates kept exactly as they are?
Yes or no. I don't care what the actual values are, I
only want to know if one of them is much stronger than
the other. Without a clear answer I can see no way
to go forward with any discussion.

((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2144. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1803000016490001@dialup-270.hip.cam.org>
Source record: 62303

In article <8agkkd$8u2$1@nnrp1.deja.com>, dr.dongle@juno.com wrote:

>[stuff deleted]
> It is interisting that you should mention cell phones, as I was going
> through some on my junk and found a OKI 3 watter with a 45 Mhx to 455
> IF section unfortunataly I have no data in it an it looks like it might
> take several days to dope it out. I dont suppose there is any chance
> you have a similar unit and already have the info?
>
>
> Other than that I have droped the TV IF idea and decided on using a
> MC1371 for 45 to 455 and FM detection and a TDA1572 for 455 to AM
> detection with a 602/612 for SSB product detection.
>
>
> dr.d
>
> P.S.All the advice has been most helpfull.

Ecah time I've scrounged up a cellphone, I've taken it apart as soon
as I got home. It was sort of like unwrapping a Christmas present;
I was wanting to know what was inside. And so I stupidly didn't
keep track of the make and models of the phones. I should have,
because as I said, the oldest of the three had more discrete and
old fashioned parts than the newer ones that had a lof of surface
mount.

The first one I took apart, with a first IF in the 80MHz range, had
a nice little module that clearly was the IF strip. I got it off
the circuit board, and there were only a handful of pins that should
be easy to figure out when I get around to it. IF in, audio out,
power, ground, maybe a squelch level. The filters were what gave
the module away.

The other two were less neat, with the componenets soldered onto
a larger board.

I would think they used common ICs for the IF strip, though I don't
have them in front of me. Even if the IC had an odd number, I would
make a guess that they are common ICs. I'd use the old trick of
checking familiar IC pinouts to what was there, and if there was
even a little match, I'd check further.

If there wasn't a match, and there wasn't a well defined stand
alone module, I probably wouldn't bother extracting the whole IF
strip. Take out the filters, making sure to sketch out the connections

and the terminating resistors, and the crystal for beating down to the final IF. Those are the valuable parts, with the IC like icing if you can identify it.

Michael VE2BVW

2145. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <3BXTON4aQzq9s6WJJdlp6exIRRM0@4ax.com>
Source record: 62304
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

On Fri, 17 Mar 2000 22:12:17 -0500, Joseph Legris <jalegris@xprint.ca> wrote:
>I always thought the "anthropomorphic principle" explained
>why people tend to resemble their pets. ;-)
>
>The Anthropic Principle has its own website:
>http://www.anthropic-principle.com/

Ok, I don't know how to spell it.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

2146. Re: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38D31C80.2E010570@xprint.ca>
Source record: 62305
Cross-posted to: rec.radio.amateur.homebrew,sci.physics.electromag

Gary Coffman wrote:
>
> On Fri, 17 Mar 2000 22:12:17 -0500, Joseph Legris <jalegris@xprint.ca> wrote:
> >I always thought the "anthropomorphic principle" explained
> >why people tend to resemble their pets. ;-)
> >
> >The Anthropic Principle has its own website:
> >http://www.anthropic-principle.com/
>
> Ok, I don't know how to spell it.
>

I thought you might like to know. "Morph" words crop up
frequently in technical talk and it's easy to be misled. I
have always thought that "anthropic" could use another
syllable anyway.

J.Legris
change the x to s to reply

2147. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <vh3TOOPIkv0LbLwpeVXyy9aWAW23@4ax.com>
Source record: 62306
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sat, 18 Mar 2000 03:34:48 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>In article <38D20A75.92DE9693@webaxs.net>,
>russell shaw <russell@webaxs.net> wrote:
>> The very simple error is your calculation of 320kohms for the
>> resonant case. The real answer is infinity kohms (ie: bigger
>> is better).
>
> I think I see now.
>
> Instead of being limited to 100V, the voltage across the
> (lossless) inductor will rise towards infinity, right?
> Put a large resistance across the parallel LC circuit
> (or a much smaller resistance in series), and you can
> extract as much energy as you want. In theory.

If you have infinite Q, then in infinite time you'd have
infinite voltage (assuming your source is a perfect
current source, which it never will be). But of course
you don't have infinite Q, even if the capacitor and
inductor are lossless, because R isn't infinite. The
loaded Q of the circuit limits the voltage rise to
a finite value.

You don't have infinite time either, you have 1/(2f).
After 1/(2f) reradiation begins, and energy is lost by
the antenna.

Note, if you have a constant voltage source instead of a
constant current source, then that obviously limits the
voltage rise to less than infinity. But if it is a perfect
constant voltage source (it won't be) then current can
rise toward infinity as R tends toward zero.

But all real sources are power limited, so there are no
infinities. With a constant current source, at some point
the current starts to decline because you've run into the
voltage limits of the supply. With a constant voltage
source, voltage begins to sag as you run into the current
limits of the supply.

For a power limited source, maximum output occurs
when the load impedance is the conjugate match of the
source dynamic impedance.

> That's what I thought. The increased power in the
> load attached to the resonant antenna is a familiar
> principle. (This says nothing about practical
> considerations for extracting huge energy flows, of
> course.)

Well, the *antenna* isn't resonant. It is electrically
short, remember? So it is very reactive. All we've
done is to present it with a load whose impedance
is the complex conjugate of the source. The antenna
is unchanged. It is still the short highly reactive antenna
it has always been. The load is different.

In other words, the antenna is still Ra-jXa, but now the
load is Rb+jXb. We've arranged values so that Ra=Rb,
and Xa + Xb = 0. This is the conjugate match condition.

> The next question: What happens if we remove the large
> metal driver-plates shown in that article, and instead
> place this electrically small, lossless resonant antenna
> a few tens of KM away from a 500KHz CW radio station?
> Orient the capacitor/dipole for best reception, of
> course.

Well the small stray coupling capacitors of your model
go away. So your voltage divider analysis is no longer
valid.

> Doesn't a similar effect arise with EM waves? Or does
> it only work with the capacitive coupling I've shown?
> Does the effect vanish if the e-field is part of a
> propagating EM wave?

If by "effect" you mean conjugate matching, no it does not go
away. However, the source impedance changes dramatically.
So the values of L and R must change in order to restore the
conjugate match. Due to inverse square spreading, the "source"
is also effectively power limited at the receive site to a *much*
smaller value than the power at the transmitter.

> I'm under the impression that the small resonant antenna
> can intercept energy from throughout its surrounding
> nearfield region (a spherical volume of approximately
> 1/pi wavelengths in diameter.) At 500KHz, the small
> antenna, if it was built from lossless components, could
> behave as if it was about 200 meters across. No?
> And it would "become" even larger at VLF?

That's a backwards way of looking at it. A truer analogy
is to say that the photons are "larger" at lower frequencies.
Since the photon represents the smallest unit of EM energy
at that frequency, your antenna will absorb all or none of its
energy if it encounters any "part" of the photon.

Lets think of it this way. Suppose you have a razor blade mounted edge on to a cannon firing water balloons. If the razor blade encounters any part of the balloon, it bursts releasing all of its water. Say this is a halfwave antenna. Now replace the razor blade with a very sharp needle point. This is your very small antenna. The balloon still bursts if any part of it encounters the needle.

We can look at the antenna situation similarly, with the added quantum mechanical quirk that the antenna gets all the energy from the photon when it "bursts".

If the balloons are made larger, the cannon doesn't have to be pointed as accurately to encounter the needle. Similarly, as frequency is decreased, and consequently the photon wavelength becomes larger, the very small antenna encounters parts of photons which are pointed further off axis. In other words, the target isn't getting larger, the bullets are. If we look at this classically, we say the antenna aperture is larger, but what's really larger are the bullets (photons) being fired at it.

Note that photons don't have a size in a classical sense. What is meant by this analogy is that the probability wave function covers a larger area at lower frequencies. It collapses to the antenna location when "pricked" by the antenna, and the photon gives up its energy by accelerating a charge on the antenna.

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

2148. Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Willy Krogstad <willy.krogstad@levanger.mail.telia.com>
Message-ID: <OVGA4.3905$F3.185732608@news.telia.no>
Source record: 62307

Hi gang!

I am looking for info on how to build my own shortwave receiver using Raytheon JAN 6088 tubes. These tubes are of the "battery" or "pencil" type and are small, low current/voltage devices. On the net I have found only one place of real info on this tube, at http://members.aol.com/sbench101/BatteryPoweredAmps/submin.html , and this is fine as long as it goes, but I really would like to find (radio or whatever) schematics and applications for this cute looking tube. Actually, ANY info on these small devices will be much appreciated!

I do not have too much experience in building radios, but I have done some transistor/IC builds from designs in various electronics magazines. I do have circuit diagrams for sw radios using "ordinary" tubes, but these seems to be of not much help.. I'm very aware that I have limited knowledge with tubes! :-)

My goal would be to build a superheterodyne radio for the shortwave broadcast bands. But I will start slovly, make a TRF first.

Willy

2149. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sd6e50qgfja64@corp.supernews.com>
Source record: 62308
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

In article <38D2D9AC.922AC7CD@miavx1.muohio.edu>,
4cx250b@miavx1.muohio.edu says...
>
> Anybody got one or two of these? I"m gettin' desperate!
>
>73,
>
>Jim W8ZR
>
I have some 5991 tubes. the oval type used in almost every freq
counter ever built. will they work? I dont have a catalog handy
to compare the two numbers.

2150. Re: Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000318035832.01950.00006429@ng-dc1.aol.com>
Source record: 62309

Hello, for future reference, try this site for tube data. Enter the tube number, in your case, 6088, and follow the links on the next page after you submit it.

http://www.duncanamps.simplenet.com/tubedata/tubesearch.html

Regards, JOE

Re:
>Subject: Raytheon JAN 6088 circuits wanted
>From: "Willy Krogstad" willy.krogstad@levanger.mail.telia.com
>Date: 3/18/00 3:14 AM Eastern Standard Time
>Message-id: <OVGA4.3905$F3.185732608@news.telia.no>
>
>Hi gang!
>
>I am looking for info on how to build my own shortwave receiver using
>Raytheon JAN 6088 tubes. These tubes are of the "battery" or "pencil" type
>and are small, low current/voltage devices. On the net I have found only one
>place of real info on this tube, at
>http://members.aol.com/sbench101/BatteryPoweredAmps/submin.html , and this
>is fine as long as it goes, but I really would like to find (radio or
>whatever) schematics and applications for this cute looking tube. Actually,
>ANY info on these small devices will be much appreciated!
>
>I do not have too much experience in building radios, but I have done some
>transistor/IC builds from designs in various electronics magazines. I do
>have circuit diagrams for sw radios using "ordinary" tubes, but these seems
>to be of not much help.. I'm very aware that I have limited knowledge with
>tubes! :-)
>
>My goal would be to build a superheterodyne radio for the shortwave
>broadcast bands. But I will start slovly, make a TRF first.
>
>
>Willy
>
>
>
>
>
>
>
>
>
>

Regards,
Joe Pratt, Tubecntral@aol.com

2151. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d6mqh.eh1.root@radioactivex.lebesque-al.net>
Source record: 62310
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

> Any changes made to my capacitor-plates setup can only
> serve to sow doubt and confusion. I choose to pursue

Excuse me for thinking RLC was simpler than C in series with RLC in
serires wuth C. What WAS I thinking?

> simplicity instead, and therefore to keep my capacitor-
> plates setup just as it is.
>
Yes, of course as I just mentioned, this escaped me. I kept
thing the additional parts that serve no purpose actually
serve no purpose.

> Notice that I'm not claiming anything yet. I'm only
> asking some simple questions.
>
Just simple enough to include the obfuscation. To quote einstein
"make it as simple as possible, but no simpler". Since all of
the physics is in the inner stuff, it doesn't seem like you can
remove the outer plates without eliminating the obfuscatory
capability of the design.

> By "antenna" in the above, I mean the metal
> plates C1 or C2. These later can serve as a simplified
> model of an electrically short dipole antenna, and C1 and

No. By antenna I meant ox cart. sheesh. One capacitor serves that
purpose. Two does not unless your purpose is to describe two dipoles
with different dipole moments that are capacitively coupled and then
pretend it isnt.

> or pursuing implications. I only want to get some agreement
> that it actually occurs in the setup that I've shown.
>
I made it simpler. I let you use any ratio you want. I dont fucking care.
Use P1 and P2 for christ's sake. jeeez. If that doesnt do it for you
and this ratio of 100:1 is drop-forged into your skill, I cant help --
I'm not a brain surgeon. I know when it's time to cut my losses on
a pointless time sink that's already taken more time from pounding my head
into the sidewalk than it deserves.

>
> I'm not discussing anything except the two devices
> illustrated on http://www.amasci.com/tesla/nearfld1.html,
> with no changes made, and with the operating conditions

> kept just as I've stated.
>

Enjoy it. You have N-1 people willing to be fooled by claims that this
is a discussion. And the text from "except" onward is unnecessary and
detracts from "anthing".

> I can make the results of this thought-experiment be
> anything I like?

That's why people refer to them as "thought experiments". If you'd
like limitations, go buy some parts and build a real one.

> That's a good tactic, if my goal was
> to "win the fight" rather than to examine some physics.
>
Then, _I'm_ mystified. There is as of yet, no physics to examine.

> You are right: I could easily use my expertise in physics

No, apparently not. Expertise would have stripped the superfluos
crap from the components in the figures by applying such expertise.
Instead, you've applied your knowledge of magic to direct attention
to useless inclusions.

> to create illusory complexity in order to sow confusion
> and deflect enquiry. It's very useful skill in sci-

How does that differ from creating illusory complexity in order
to sow confusion and deflect enquiry"?.

> newsgroup flamewars where the enemy must be defeated at
> any cost. However, it's very damaging when used in a

That may be, but find another person willing to pay you for annealing.
I'm willing to be defeated as soon as the law of diminishing returns
indicates I'd be better off trying to convinve the pope to elevate
the sisters of perpetual indulgence to sainthood or to convince the amish
to buy microwave ovens.

> scientific discussion, where clarity and understanding
> are the goals.
>
I guess I missed that thread.

> If instead the goal is to illuminate concepts, then

Then, you'll need a bulb and some batteries. Wishing has yet to
be a reliable substitute for either.

> extreme simplicity works well. Simplicity allows ideas

How can you tell? You keep avoiding it.

> to gain their own voices, and they need far less
> interpretation.
>

I take it then, you have a different objective that requires
the additional, unnecessary pieces than you can obtain with
a simple picture.

> Until I hear clear answers to my simple questions, I'm not
> relating it to anything. I'm not discussing "energy
> sucking antennas" anymore, or any implications of these

Have a nice day.

> circuits, or what occurs in variants of them. I'm
> only discussing what happens in the situation as
> depicted on http://www.amasci.com/tesla/nearfld1.html

With whom? Your fans? Time wasting isn't all that popular.

> With the circuits and plates kept exactly as they are?
> Yes or no. I don't care what the actual values are, I

Yes, you do., since I answered all of this along with descriptions
of the charges flowing and stored energy in great detail for the
general case, so that "why" would be obvious to a casual observer.
I now just need to qualify, "obvious" and "casual observer" to be
more restricted sets.

> only want to know if one of them is much stronger than
> the other.

No you don't or you wouldnt be repeating this request as a response
to something containing the answer.

> Without a clear answer I can see no way
> to go forward with any discussion.
>

You wont be able to see a way to go forward unless you can get
a checkbox response to the entire process that led you to your
misunderstanding of the physics involved. I'm afraid I dont
see what I get out of following you to unenlightenment.

If you want it your way, I recommend burger king rather than posting
to usenet where no one gets paid to pander to nonsense or fired for
noticing bullshit.

2152. WTB: VHF and UHF Yagi's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <c837dsov83t219uvcj4rplir8l19a3ke2u@4ax.com>
Source record: 62311
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for some inexpensive VHF (144) and UHF (432) Yagis. Please let
me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2153. WTB: Kris 23+

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <l147dsgkfj333ohn7d3a85imjl8q95imad@4ax.com>
Source record: 62312
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an old Kris 23+ tube type 23 channel CB rig. Used to have one of these many years ago and I'm trying to compile a collection of all my old pre-hamradio rigs. Guess I'm on a nostalgia kick ! Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2154. WTB: Tram Titan II or IIA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <0347ds8idb8aq0vtau8904qvbpbptjegvs@4ax.com>
Source record: 62313
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an old Tram Titan II or IIA AM/DSB tube type 23 channel CB rig. Used to have one of these many years ago and I'm trying to compile a collection of all my old pre-ham radio rigs. Guess I'm on a nostalgia kick ! Working or non-working ok. Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2155. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D374CF.9A52C253@webaxs.net>
Source record: 62314
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge wrote:
>
> >
> >^ Correct (not sure about the 1/pi bit). By building up a large
> >energy field around the receiver (large electromagnetic field,
> >E and H 90deg apart in time), your very extended field supports
> >(or represents) a displacement current through the surrounding
> >space. Thus a 1m loop with 100m extent energy field, acts like
> >a system with a *distributed conducting structure* in the
> >surrounding space.
>
> Energy cannot be absorbed without the photon being absorbed
> by a charge in the conductors that make up the antenna. Furthermore,
> photons do not interact with other photons, so the field (which is
> nothing but virtual photons) cannot alter the path of a photon to
> change the incident flux. The incident flux density is determined
> by the overall geometry. Once that is fixed, whatever changes are
> made can only alter the efficiency of the antenna in transferring
> the incident energy to whatever load is present. While it may be
> useful to consider this efficiency fixed and treat the antenna as
> having different electrical and geometric sizes, any energy that
> "builds up" has to be the result of radiation that the antenna
> cant use, not a result of the antenna creating conditions that
> increase the incident flux.

Who said anything about photons? If i put a magnet near a ball-bearing,
and cause the ball-bearing to start rolling along a flat surface, i have
transferred energy to it. Any photons?

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2156. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <mAacWBAugy04EwcD@jmwa.demon.co.uk>
Source record: 62315
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8av1apltn1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:

>I believe that the real problem involves my explanation. My
> explanation might very well be incorrect, yet the phenomenon
> in question still is real. Unfortunately, the folks on
> sci.physics.electromag, in order to "stop me" or something,
> are distorting physics itself, and trying to say that
> the conclusions on http://www.amasci.com/tesla/nearfld1.html
> go against physical law. I am moved to ask: who presents
> the greater "danger" to physics, those like me who excitedly
> discover interesting aspects and then explain it WRONG, or
> those who conveniently alter it as needed, whenever they
> wish to "defend" it against threats?
>
> I am here to root out my errors. I suspect that the same is
> not true of everyone here.

This is an age-old problem. Yes, there are people who wish to 'preserve
order' by suppressing 'inconvenient' facts. These days, in electrical
science, they usually get short shrift if they are found out, but some
can disguise their stance and get away with it for some time. I recall
about 20 years ago a recurrence of the 'flux linking/flux cutting'
argument and a proposal to stop telling students about, for example,
Faraday's Disc, and other constructions that highlight the subject. It
was not favourably received! I hope that these days there is no longer a
problem in this area because students are taught a form of Faraday's Law
which does not produce the false controversy.
>
> Can an electrically small antenna intercept much more
> energy when it has a resonator, than if it does not? Simple
> question. And contrary to those who loudly insist that
> the answer is not interesting, I think that it is.

Yes, it can, and it is mildly interesting.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2157. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000318073033.12748.00001586@nso-fp.aol.com>
Source record: 62316

In article <38d2d2ec.114732441@news.online.no>, LA8AK@online.no (J M Noeding) writes:

>On Fri, 17 Mar 2000 19:05:38 GMT, n2ey@aol.com wrote:
>
>
>
>>
>>You don't need perfect DC for a high power amp - 1% ripple is better
>>than any mode requires.
>>>
>obviously your remarks may seem to make sense for somebody
>but which importance has 10% ripple on 28 or 60VDC ...or say 3kV on
>supply line to a linear amplifier? Just nothing, you need no voltage
>regulation nor low ripple
>
That's what I'm saying.

You need filtering, but not to the same level required in a receiver or low-level transmitter stages. You need the voltage to be reasonably constant (say, 5%) but not electronically regulated.

73 de Jim, N2EY

2158. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000318073032.12748.00001585@nso-fp.aol.com>
Source record: 62317

In article <38d25fbe.85241845@news.online.no>, LA8AK@online.no (J M Noeding) writes:

>not sure where you got it from that capacitor input means "no choke"
>This is rather simplified, and just not true

I didn't say it meant "no choke" in all designs.

The question was about power supplies for high-power RF amplifiers. On this side of the pond, capacitor-only filters have been used since the 1960s for such purposes.
>
>but as you say "id depends"
>yes, it depends whether you have a pi-type filter or just a capacitor

Very few high power amateur transmitters that I've seen use a pi-type filter.
>
>If we do not deal with swinging chokes, I vote for the capacitor input
>filter since it has higher efficiency than only capacitor filter, see
>explanation above

All factors have to be considered. Efficiency is important - but so is cost, size, ripple, voltage variation from full-to-no-load, and component availability. The "best" design is useless if you can't get the parts.

73 de Jim, N2EY
>
>On Fri, 17 Mar 2000 13:46:01 GMT, n2ey@aol.com wrote:
>
>
>>Hello Ron,
>>
>>Like so many things, the answer is "it depends". Here's the story:
>>
>>There are two basic types of power supply filter: Capacitor-input and
>>choke-input - named for the first element after the rectifier. The
>>filter consisting of just a capacitor is the simplest type of capacitor-
>>input filter.
>>
>>The pros and cons of the two types are listed below. Vrms is the
>>transformer secondary voltage:
>>
>>Choke input:
>>- Choke must be at least "critical inductance"
>>- Output voltage cannot exceed 0.9 Vrms
>>- Peak rectifier current is only a few times the average, and can be

>>reduced by making choke larger, which also improves filtering
>>- Good filtering possible with relatively small values of L and C
>>- Good regulation if a choke with low DC resistance is used
>>- Good power factor
>>- Low turn-on surge
>>
>>Capacitor input:
>>- No choke needed in some designs
>>- Output voltage can reach 1.4 Vrms if capacitor is big enough
>>- Peak rectifier current is several times the average, and is increased
>>by making the input capacitor larger to improve filtering.
>>- Good filtering requires large C if only C is used
>>- Good regulation only if large C is used. Poorer regulation than choke
>>input in most cases.
>>- Poor power factor
>>- High turn-on surge
>>
>>In the old days, choke-input ruled supreme for several reasons. The
>>most important reason was the limitations of vacuum and mercury vapor
>>rectifiers - they could not tolerate the large peak-to-average curren
>>ratios of capacitor input filters when used in high power applications.
>>In addition, the only practical capacitors for high power applications
>>were paper-oil type, which are expensive to make and large in size. And
>>a good power factor helped avoid blinking the lights too badly.
>>Finally, in those days the cost of winding chokes and transformers was
>>not that high, so the minimum cost solution involved a lot of iron.
>>
>>The invention of high voltage silicon rectifiers and "computer grade"
>>electrolytic capacitors changed the game in the 1960s and 1970s.
>>Capacitor values that would have been physically and economically
>>impractical with the old paper-oil caps were possible with strings of
>>the new electrolytics. And cilicon rectifiers of adequate rating could
>>handle the large peak currents. Light blinking and poor power factor
>>were less of a concern as more hams' homes were wired for 100, 150 and
>>200 amp service, instead of the old 60 amp services that were common
>>before 1960 or so.
>>
>>The end result is that, today, you get to pick which way to go. The
>>determining factor to most homebrewing hams now is "what parts do I
>>have/can get?" You can go the "modern" way with silicon rectifiers and
>>a capacitor bank (you need lots of MFD's, though), or the "old" way
>>with either tube or silicon rectifiers, a suitable input choke, and a
>>much smaller capacitor.
>>
>>Complete design info is available in the ARRL Radio Amateur's Handbook.
>>Trouble is, if you want the info on choke-input, you have to look at an
>>older edition. It's all pretty simple, though.
>>
>>Any more questions? I can describe the whole design process, but this
>>post is long enough as it is.

>>
>>I run a pair of 866As into a choke input filter for my homebrew rig.
>>Great regulation, low power factor, smooooooooooooth DC. Sure it's big
>>and heavy, but the parts cost me pennies at hamfests. And the MV flash
>>is always nice to look at. 'Specially at 3 AM on Field Day.
>>

2159. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d36366.151724246@news.online.no>
Source record: 62318

On 18 Mar 2000 05:06:50 GMT, blackm00@cam.org (Michael Black) wrote:

>
>Someone pointed out some months back that you need to double the
>incoming signal and lock to that if you are trying to demodulate
>DSB with no carrier (or I suppose AM where the carrier has been lost
>along the way). I'd seen circuits that that, but until that post
>I hadn't quite figured out the point. Could that be the reason
>for a 910KHz VCO? If you have to divide the VCO by two to get
>a 455KHz signal, surely there is as much chance for the signal
>to bet back into the IF strip than if you started with a 455KHz VCO.
>
totally reversed/misunderstood
The problem is that the oscillator, and tuned circuits radiates,
possibly due to some magnetic coupling, while a divider with short
connection to another IC cannot radiate

2160. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: "G.p.G. <I>" <Furbish@aamerican.com>
Message-ID: <38D37CE0.B163B7F4@aamerican.com>
Source record: 62319
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

Jim W8ZR:

I went through this same thing a few
months back. Bought an older style
18 Ghz. Systron Donner frequency meter
on e-Bay for $60, and one of the display's
Nixie tubes was cracked on receipt.

Found a few places listed on the InterNet
that said they had them, but when I went to
order them, they didn't have any in stock.

Locally Richardson Electronics has them
new for only $90.00 each; and another
place, in New York I think, had them for
only, $110.00 each! The N.Y. guy got
mad when I politely explained that I only
paid $60 total for this unit, which still has
8 good Nixie tubes in it. For a while their
I was thinking of selling the other good 8
Nixie tubes at $100 each, and making a
$800 + profit, NOT!

Anyway, I did eventually find two places
that have Nixie Display tubes at reasonable
(~$20) prices, and did buy 3 from the latter.

1) Antique Electronic Supply, Tempe, Az.
(480) 820-5411
2) Sphere Research Corporation BC, Canada
http://www.sphere.bc.ca/test/nixies.html
Phone: (250) 762-5455
FAX: (250) 762-0244

Hope this helps;
Gregory Gately (K9OYO)
(708) 387-2490
Now 15/16th of the way to being an EXTRA-, this coming April 15th!

James C. Garland" wrote:

> Anybody got one or two of these? I"m gettin' desperate!
>
> 73,
>
> Jim W8ZR

2161. WTB: Iambic keyers and Paddles

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <6u27dssgb34753bbricm9cpj1brriql69a@4ax.com>
Source record: 62320
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an inexpensive iambic keyer and iambic paddle. Memory keyers will also be considered if the price is right. Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2162. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: arnoldg@sf.telia.no
Message-ID: <38d3aa87.631514@news.telia.no>
Source record: 62321
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew
Body handling: HTML body converted to readable text

On Sat, 18 Mar 2000 06:56:01 -0600, "G.p.G. "
wrote:

> Locally Richardson Electronics has them
>new for only $90.00 each; and another
>place, in New York I think, had them for
>only, $110.00 each! The N.Y. guy got
>mad when I politely explained that I only
>paid $60 total for this unit, which still has
>8 good Nixie tubes in it. For a while their
>I was thinking of selling the other good 8
>Nixie tubes at $100 each, and making a
>$800 + profit, NOT!
>
> Anyway, I did eventually find two places
>that have Nixie Display tubes at reasonable
>(~$20) prices, and did buy 3 from the latter.
>

Hi,

I have 14 pcs in stock - NOS - but in white boxes - at NOK 115.-
/each. This is about USD 13.70 /each. Shipping from Norway to US
should not be more that $ 5 - 6

Regards,

Arnold Goksyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://demostenes.vestdata.no

Valves, sockets, transformers, books and components
Good stock on all types. We ship worldwide.

2163. WTB: Broken/Dead HF/VHF/UHF/Tube Type CB Gear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <6c37dsoorp04pca0diuo55vbv0sl400lpn@4ax.com>
Source record: 62322
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for some stuff to tinker around with. If you have any dead or near dead HF, VHF, UHF or tube type CB equipment you would like to unload please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2164. Re: Used RG-8 Coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <pWNA4.141$%S1.17750@nntp0.chicago.il.ameritech.net>
Source record: 62323
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Tim,
Just go buy it. It would cost more to ship 50 feet of coax than it costs to purchase it new.

Regards,
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

K8TJ <tje@usol.com> wrote in message
news:gv47ds8kusr66buvins0i5tlqk5kr9rmml@4ax.com...
> Looking for some used inexpensive RG-8 coax. Prefer it in over 50' in
> length. Please let me know what you have and your asking price.
> Thanks.
> --
> Tim, K8TJ
>

2165. WTB: HF Trap Vertical

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <6g37dsg8mejhjvfv3qll7pf7u0br0089k0@4ax.com>
Source record: 62324
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an HF trap vertical. Please let me know what you have and
your asking price. Thanks.
--
Tim, K8TJ

2166. WTB: VHF and UHF Amplifiers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <7i37dsoau4oi5umb9chuablvv5cmcmtmms@4ax.com>
Source record: 62325
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for a high power VHF (144 Mhz.) amplifier a medium power UHF (432 Mhz.) amplifier. The VHF amp would need to be rated at 10 watts or less input and the UHF rated at 5 watts or less input. Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2167. WTB: Lafayette Comstat 25A Tube Type CB

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <ft37ds8ucckggaptqlr6ncmlr0d4462hmk@4ax.com>
Source record: 62326
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an old Lafayette Comstat 25A tube type 23 channel CB rig.
Used to have one of these many years ago and I'm trying to compile a
collection of all my old pre-hamradio rigs. Guess I'm on a nostalgia
kick ! Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2168. WTB: HF Mobile Antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <gm37dskv3buph38k9uqnb7i93eop22r7n9@4ax.com>
Source record: 62327
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for some mobile HF Hamsticks or the clones by Pro-Am by Valor
for the following bands: 40, 30, 10 and 6 meters. These have a 3/8-24
thread mount. Please let me know what you have and your asking price.
Thanks.
--
Tim, K8TJ

2169. WTB: Ham Desk Mic's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <7q37ds8hdmstgsu8g54f2tq3k1rst4k0cd@4ax.com>
Source record: 62328
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for a couple of inexpensive desk mic's. Something such as
Kenwood MC-50, Icom SM-2, Shure 444, Turner +2, Turner +3, etc. Please
let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2170. WTB: Kris Mach 3B or Boomer Amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <g547dsknlge7jb4ud26716mrtgv0pe1gmf@4ax.com>
Source record: 62329
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an Kris Mach3B or Boomer 600 amplifier. Want to try converting one for 6 meter use. Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2171. WTB: Ameco PT-2 HF Preamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <gb47dss3g8cc69fo2ai4qlet6aa61gu5dh@4ax.com>
Source record: 62330
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for a working Ameco PT-2 HF preamp. Please let me know what
you have and your asking price. Thanks.
--
Tim, K8TJ

2172. WTB: Wideband HF Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <j847ds8rbkogc8q4nmjepokbhhu2gjh31n@4ax.com>
Source record: 62331
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for a working wideband solid state HF amp that will cover 3-30
Mhz. Must be capable of SSB/CW use. Please let me know what you have
and your asking price. Thanks.
--
Tim, K8TJ

2173. Re: Autek MK-1 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Hauge <hauge@CUThrcnet.dk>
Message-ID: <8b048hip1@news.cybercity.dk>
Source record: 62332

Hi

"K8TJ" <tje@usol.com> wrote in message
news:rc47dskcmg26lu76cbdegcbsl75al8n6k0@4ax.com...
> Looking for an inexpensive Autek MK-1 keyer. Working or non-working is
> ok. Please let me know what you have and your asking price. Thanks.

Are you a spamer ??

2174. WTB: Used RG-8 Coax

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <gv47ds8kusr66buvins0i5tlqk5kr9rmml@4ax.com>
Source record: 62333
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for some used inexpensive RG-8 coax. Prefer it in over 50' in length. Please let me know what you have and your asking price.
Thanks.
--
Tim, K8TJ

2175. WTB: Autek MK-1 Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <rc47dskcmg26lu76cbdegcbsl75al8n6k0@4ax.com>
Source record: 62334
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for an inexpensive Autek MK-1 keyer. Working or non-working is ok. Please let me know what you have and your asking price. Thanks.
--
Tim, K8TJ

2176. WTB: Used 2 Meter FM Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: K8TJ <tje@usol.com>
Message-ID: <0257dski3n519jbu1ivgnjeshcvvjj3p9d@4ax.com>
Source record: 62335
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

Looking for a very inexpensive 2 meter rig that puts out between 10
and 25 watts. Going to use it to drive a Mirage 100 watt amp. Memories
and tones not necessary. Please let me know what you have and your
asking price. Thanks.
--
Tim, K8TJ

2177. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D3C24A.BABD608E@mlecmn.net>
Source record: 62336
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>
>
> Can an electrically small antenna intercept much more
> energy when it has a resonator, than if it does not? Simple
> question. And contrary to those who loudly insist that
> the answer is not interesting, I think that it is.
>

> There are two separate issues here:
>
> 1. Does the phenomenon exist? Do electrically small
> dipole or loop antennas, if they are part of a high-Q
> resonator, allow interception of more power than if the
> resonator is not present?
>
> 2. Is Bill Beaty's explanation of this effect a load
> of crap?
>
> The answer to #1 is not totally clear as yet. When applied
> to the e-field between a pair of metal plates, it appears
> that a resonant antenna DOES work far better than one
> without a resonator. (There was an error on my webpage,
> but it involved L1 and C2, and it caused me to vastly
> UNDER-estimate the theoretical limits on power. My
> 100:1 ratio was wrong. It is much, much higher.)
>

I'll attempt to shed some light on question #1 with a review of conventional, boring, old-fashioned antenna concepts. This discussion will concentrate on small "electric" dipoles; small "magnetic" dipoles behave similarly except that their equivalent circuits are inductive rather than capacitive.

The "effective area" of an antenna is equal to G*(wavelength squared)/(4*Pi), where G is the directive "gain". For a very small dipole, G is 1.5. Multiply this area by the incident power density and you know how much power is theoretically available from the antenna terminals. This area is much greater than the physical size of the antenna, which causes a lot of confusion even among people who claim to be antenna experts. In practice, only a small amount of the theoretically available power can be delivered to a load because of losses in the antenna system itself, and in the matching system required to transfer maximum power to the desired load. The equivalent circuit of

an electrically small dipole is a large capacitive reactance in series with a small resistance. A matching network (sometimes as simple as a "loading" coil in series with the antenna) is needed to provide a "conjugate match" with the load resistance in order to achieve maximum power transfer. When an antenna is less than 1/100th of a wavelength long, it is very difficult to obtain overall efficiencies of better than 1 per cent, and the efficiency drops off as something between the inverse square and the inverse cube of the physical antenna size. For this reason, very small LF transmitting antennas are usually monopoles (vertical antennas above a ground plane) because the "reflection" of the monopole in the ground creates an effective antenna length that is twice as great as the physical height of the monopole. Antennas are reciprocal devices, so a vertical monopole above ground is also the best choice for a receiving antenna where the objective is to extract as much energy from the incident wave as possible (although I personally prefer loops for normal LF listening, because signal-to-noise ratio is limited by atmospheric and man-made noise picked up by the antenna, rather than by available signal power).

Both the ARRL Handbook and ARRL Antenna Book contain the following two paragraphs, stating the Conjugate Matching Theorem as defined by the National Institute of Standards and Technology (NIST) and applying the theorem to a generic "Transmatch", or antenna matching device:

"If a group of four-terminal networks containing only reactances (or lossless lines) are arranged in tandem to connect a generator to its load, then if at any junction there is a conjugate match of impedances, there will be a conjugate match of impedances at every other junction in the system."

"To paraphrase from the NIST definition, "conjugate match" means that if in one direction from a junction the impedance has the dimensions R + jX, then in the opposite direction the impedance will have the dimensions R -jX. And according to the theorem, when a conjugate match is accomplished at any of the junctions in the system, any reactance appearing at any junction is canceled by an equal and opposite reactance, which also includes any reactance appearing in the load. This reactance cancellation results in a net system reactance of zero, establishing resonance in the entire system. In this resonant condition the generator delivers its maximum available power to the load. This is why an antenna operated away from its natural resonant frequency is tuned to resonance by a Transmatch connected at the input to the transmission line."

The kicker in making an efficient energy sucking antenna is that extremely high Q circuits are required in the Transmatch (or whatever you want to call the gadget used to achieve resonance). By the way, the Transmatch also provides impedance transformation, which is necessary if you want to deliver energy to a load resistor other than one with zero or infinite resistance. Even with very high Q components in the matching network, there are very significant losses from the ground system (in

the case of the vertical monopole) or from any objects in the near field of a small antenna.

Here is a sample calculation of energy capture from a 50 kW, 500 kHz station at 10 km, using "conventional" antenna theory. The effective area of a small dipole at 500 kHz is about 43,000 square meters, and in free space the power density from a 50 kW station at 10 km would be about 0.00004 watts per meter. The theoretical maximum power available from the short dipole is therefore about 1.7 watts. At 500 kHz, the wavelength is 600 meters, and a 1/100th wavelength antenna would be 6 meters (about 20 feet) high. As stated earlier, it is fairly difficult to obtain 1 per cent efficiency with a 1/100 wavelength high antenna _and_ its matching system. That's better than any of my LowFER friends are doing with their 15 meter high transmitting antennas in the 160-190 kHz range. Assuming 1 per cent efficiency, the power delivered to the load in this example would be 17 milliwatts. Not bad; enough to light an LED. With a really high-Q, 20-foot, resonant, energy sucking antenna, this is about the level of perfomance I'd expect. Maybe it's possible to do better, but in no case better than the 1.7 watt limit of a small 100 per cent efficient dipole.

In my opinion, making an antenna part of a high-Q resonator provides no special properties above and beyond fulfilling (at least partially) the circuit requirements for achieving maximum power transfer to the load.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

2178. Toroid Core Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <dNPA4.3403$9M1.262186@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62337

Hi All,
I have a large toroidal core with the number:
AKO3G-5 (symbol) 54620-12K3
The (symbol) looks like a hysteresis curve
or a fat S.
Does anyone know who made it or what material
it might be?

-- Thanks
Mike Knowlton
Panama City Fl.

2179. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <qcXTOL6hNekFnaytA0IeztUx=wi3@4ax.com>
Source record: 62338
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sat, 18 Mar 2000 21:22:47 +1000, russell shaw <russell@webaxs.net> wrote:
>Gary Coffman wrote:
>>
>> On Sat, 18 Mar 2000 03:34:48 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>> >In article <38D20A75.92DE9693@webaxs.net>,
>> >russell shaw <russell@webaxs.net> wrote:
>> >> The very simple error is your calculation of 320kohms for the
>> >> resonant case. The real answer is infinity kohms (ie: bigger
>> >> is better).
>> >
>> > I think I see now.
>> >
>> > Instead of being limited to 100V, the voltage across the
>> > (lossless) inductor will rise towards infinity, right?
>> > Put a large resistance across the parallel LC circuit
>> > (or a much smaller resistance in series), and you can
>> > extract as much energy as you want. In theory.
>>
>> If you have infinite Q, then in infinite time you'd have
>> infinite voltage (assuming your source is a perfect
>> current source, which it never will be). But of course
>
>^ Constant voltage source in the example, no current limit.

Ok, if it is a constant voltage source, then the voltage is
finite, fixed, and limited from the get go. That's by definition
of what a constant voltage source is.

>> you don't have infinite Q, even if the capacitor and
>> inductor are lossless, because R isn't infinite. The
>> *loaded* Q of the circuit limits the voltage rise to
>> a finite value.
>
>^ Q *approaches* infinity as RL->infinity, and then Pload->infinity.

Ok, and for a constant voltage source, current through RL approaches
zero as RL approaches infinity. Note that this is just the opposite of
what happens with a constant current source.

>> You don't have infinite time either, you have 1/(2f).
>> After 1/(2f) reradiation begins, and energy is lost by
>> the antenna.
>
>^ The discussion is on the capacitor plate system where far-field

>effects are not being considered (eg: tesla coil).

What does that have to do with frequency? Energy only builds in
the system during a half cycle. The following half cycle the field
collapses and energy is reradiated.

>> Note, if you have a constant voltage source instead of a
>> constant current source, then that obviously limits the
>> voltage rise to less than infinity.
>
>^ Incorrect. The voltage approaches infinity asymtotically
>using a constant voltage source.

Nonsense. By definition the voltage of a constant voltage
source stays fixed, finite, and constant. Only in the case of
an ideal constant current source can the voltage approach
infinity.

>For a current, voltage is only infinite for open circuit.

Correct. For a constant current source, voltage is infinite
for an open circuit. That is *not* true for a constant voltage
source, however.

>> But if it is a perfect
>> constant voltage source (it won't be) then current can
>> rise toward infinity as R tends toward zero.
>
>The example assumes constant voltage source. Also, if RL=0,
>Iload is finite.

Assuming a constant voltage source, then by definition current
goes to infinity as RL goes to zero. This is simple Ohm's Law
stuff.

>> But all real sources are power limited, so there are no
>> infinities. With a constant current source, at some point
>> the current starts to decline because you've run into the
>> voltage limits of the supply. With a constant voltage
>> source, voltage begins to sag as you run into the current
>> limits of the supply.
>
>^ The example is using ideal sources.

Fine. Just make up your mind what you mean by ideal source.
You seem very confused between what is meant by a constant
voltage source and what is meant by a constant current source.
You should also realize that neither actually exists in real systems.

All real systems are power limited. They may have characeristics
of a constant voltage or constant current source at low power
levels, but as you approach the limit conditions, they become
power limited and no longer behave as constant voltage or current

sources. This is true even with ideal components. Real component losses only make matters worse.

Gary

Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

2180. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: dangerdav@earthlink.net
Message-ID: <WtTTOBxlwhcGnLmDEvN3VfLIVvJU@4ax.com>
Source record: 62339
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>On Sat, 18 Mar 2000 11:52:10 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:

... snip good stuff ...

Nice explanation, Lyle. Thanks.

Regards,
Dangerdave

2181. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b12rfgom1@nnrp1.deja.com>
Source record: 62340
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <vh3TOOPIkv0LbLwpeVXyy9aWAW23@4ax.com>,
Gary Coffman <ke4zv@bellsouth.net> wrote:
> On Sat, 18 Mar 2000 03:34:48 GMT, Science Hobbyist
<bbeaty@microscan.com> wrote:

> If you have infinite Q, then in infinite time you'd have
> infinite voltage (assuming your source is a perfect
> current source, which it never will be).

I'm not trying to prove that infinite power is
available to R2. My question is still the same:
what is the relative difference in power between
the load resistor for the Fig 2 antenna (R2), versus
the load resistor for the Fig 1 antenna (R1).

If you agree that the power in R2 is greater than the
power in R1, then feel free to design a practical
version of the circuits depicted on the website.
Note that practical considerations cannot be used
to disprove what is shown on http://www.amasci.com/tesla/nearfld1.html
That website only illustrates a basic principle.
If you are certain that the principle itself is
wrong, and that the C2 antenna with the resonator
cannot power its load resistor at a larger Pd than
the C1 antenna which lacks a resonator, then please tell
me where I went wrong, and calculate what the power
in those resistors should be instead.

> Note, if you have a constant voltage source instead of a
> constant current source, then that obviously limits the
> voltage rise to less than infinity.

The power supply depicted on that webpage is a
constant voltage source. Until I see some agreement
that the power in R2 is actually higher than the
power in R1, I am not interested in any other circuits
but the ones depicted.

> But if it is a perfect
> constant voltage source (it won't be) then current can
> rise toward infinity as R tends toward zero.

I am not discussing practical issues. They too easily
end up confusing things. I am discussing the circuit
on http://www.amasci.com/tesla/nearfld1.html which uses

lossless components. If you wish, you can calculate
the settling time of those circuits. I am not
interested in the settling time of an infinite-Q
circuit, or of any other circuits besides the ones
depicted on that webpage.

> > The next question: What happens if we remove the large
> > metal driver-plates shown in that article, and instead
> > place this electrically small, lossless resonant antenna
> > a few tens of KM away from a 500KHz CW radio station?
> > Orient the capacitor/dipole for best reception, of
> > course.
>
> Well the small stray coupling capacitors of your model
> go away. So your voltage divider analysis is no longer
> valid.

True, but I guess I didn't ask the question clearly
enough. Here is what I'm trying to find out:

If we remove the large metal plates shown on
http://www.amasci.com/tesla/nearfld1.html and
instead use a distant radio transmitter to
power the two circuits, is the power in R2 still
significantly greater than the power in R1? And
is the e-field adjacent to the C2 plates still
significantly greater than the e-field adjacent
to the e-field near C1?

(I assume that we do as before: tune the LC circuit for
maximum power, adjust the value of R1 for maximum
power, then see if we can find values of R2 which
give it a higher power than that in R1.)

> > Doesn't a similar effect arise with EM waves? Or does
> > it only work with the capacitive coupling I've shown?
> > Does the effect vanish if the e-field is part of a
> > propagating EM wave?
>
> If by "effect" you mean conjugate matching,

No, by "effect" I refer to the topic of this thread:
the maximum power achievable by the C2-L2 antenna
being significantly higher than the maximum power
achievable by the C1 antenna. Just so there is no
misunderstanding, "power achievable" means the Pd of
each load resistor. By "effect" I also mean that the
e-field adjacent to the resonator's C2 plates is
significantly higher than the e-field adjacent to the
C1 plates.

> > I'm under the impression that the small resonant antenna
> > can intercept energy from throughout its surrounding
> > nearfield region (a spherical volume of approximately
> > 1/pi wavelengths in diameter.) At 500KHz, the small
> > antenna, if it was built from lossless components, could
> > behave as if it was about 200 meters across. No?
> > And it would "become" even larger at VLF?
>
> That's a backwards way of looking at it.

Are you saying that it's WRONG? If my value of
1/pi wavelengths is incorrect, please tell me what it
should be instead.

> A truer analogy
> is to say that the photons are "larger" at lower frequencies.
> Since the photon represents the smallest unit of EM energy
> at that frequency, your antenna will absorb all or none of its
> energy if it encounters any "part" of the photon.

I'm not discussing photons. That is a distraction which
can easily obscure these issues rather than illuminate
them. I'm discussing these two simple antennas in term of
EM fields and EM waves. If you believe that EM waves do
not exist, or that for some reason we cannot talk about
them (and must only discuss photons?) then there is little
point to this debate.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
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2182. Re: "energy sucking" simplified ? --> It aint that easy.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b13pq$he6$1@nnrp1.deja.com>
Source record: 62341
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In article <MKDA4.51061$3b6.209234@ozemail.com.au>,
"phil" <philpr@ozemail.com.au> wrote:
> I see no inclusion in your analysis of the impedance of your antenna
and
> load.

I am not yet trying to understand what is going on in my
postulated problem. First things first. I am only
asking a very simple question: what is the maximum power
in R1 and R2 in the circuits shown on
http://www.amasci.com/tesla/nearfld1.html ?

From my reasoning, I conclude that the maximum
power available to R2 in the Fig-2 antenna is MUCH
GREATER than the maximum power available to R1 in
the Fig-1 antenna.

> The effect of this is non trivial, and has a fundamental effect on
bopth the
> antenna, its effective size and I suspect your "problem" with
understanding
> what is going on in your postulated problem.

OK, please feel free to analyze this with impedance
included. Does your improved analysis affect my conclusion?
If not, then my conclusion still stands. I conclude that the
Fig-2 antenna can heat its load resistor far more than
the Fig-1 antenna if the metal plates C2 and C1 are the same
for both, and if all components are adjusted to produce
maximum power.

> I suggest that you get a decent book on antennas and have a read,
antenna
> behaviour analysis does not respond well to simplification unless it
is very
> carefully thought out.

This may be so. That's why I'm here: so that people who
know more than I do can tell me whether R2 CANNOT receive
more power than R1. I claim that it does. If I am wrong,
and if R2 cannot receive any more power than R1, then
please help me correct my mistake by telling me what
the power for R2 and R1 should really be?

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
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2183. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D3FF93.288D85DB@mlecmn.net>
Source record: 62342
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Oops...

Lyle Koehler wrote:
>
> When an antenna is less than 1/100th of a wavelength
> long, it is very difficult to obtain overall efficiencies of better than
> 1 per cent, and the efficiency drops off as something between the
> inverse square and the inverse cube of the physical antenna size.

Efficiency of a very short antenna system (including matching losses) is
proportional to something between the square and the cube of the
physical antenna size, not the _inverse_ as stated in my earlier post.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

2184. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d7vr5.eh1.root@radioactivex.lebesque-al.net>
Source record: 62343
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

```
>
>Who said anything about photons? If i put a magnet near a ball-bearing,
>and cause the ball-bearing to start rolling along a flat surface, i have
>transferred energy to it. Any photons?
>

Uh, yes. How do you think the force between the magnet and
ball takes place?
```

2185. Knight P-2 SWR/Power meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: KC2DLA Paul <kpaul@usa.net>
Message-ID: <8b14j8$f0t$1@bob.news.rcn.net>
Source record: 62344
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Hello Group,
I just purchased a Knight model p-2 SWR meter. I was told that it will handle 1.5kw (which I am not interested in) and that it is good up to 225MHz. I popped off the cover of the RF sensing unit(which is separate from the meter) and noticed that the lead through for the coax is entirely shielded, which says to me that it could accurately measure SWR up to 225MHz. I would like to use this meter for qrp work and accurate measurement of SWR from 1 to 5 watts on HF. It does have a sensitivity pot on the meter, but I cannot drive my TS-520 down that low (or being totally honest, I am not sure how to drive it below 10 watts) in order to test right away. If the meter is not sensitive enough for qrp, is it possible for me to change the resistors or capacitors in the RF sensor or maybe even the main sensitivity pot in the meter? If anybody knows any more information about this power meter, I would love to hear from you!

Tnx es 73 de Paul, KC2DLA

2186. Re: Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38D43EF6.2B7C036D@valley.net>
Source record: 62345

Willy Krogstad wrote:

> Hi gang!
>
> I am looking for info on how to build my own shortwave receiver using
> Raytheon JAN 6088 tubes. These tubes are of the "battery" or "pencil" type
> and are small, low current/voltage devices. On the net I have found only one
> place of real info on this tube, at
> http://members.aol.com/sbench101/BatteryPoweredAmps/submin.html , and this
> is fine as long as it goes, but I really would like to find (radio or
> whatever) schematics and applications for this cute looking tube. Actually,
> ANY info on these small devices will be much appreciated!
>
> I do not have too much experience in building radios, but I have done some
> transistor/IC builds from designs in various electronics magazines. I do
> have circuit diagrams for sw radios using "ordinary" tubes, but these seems
> to be of not much help.. I'm very aware that I have limited knowledge with
> tubes! :-)
>
> My goal would be to build a superheterodyne radio for the shortwave
> broadcast bands. But I will start slovly, make a TRF first.

Hello--

If you haven't discovered this web site, take a look:

http://www.intio.or.jp/jf10zl/

This Japanese OM offers a wide range of innovative tube and semiconductor
projects
and construction tips. The pages are in Japanese and English (not completely
fluent, but
his English is infinitely better than most of us can write in Japanese<g>).

73,
Brad AA1IP

2187. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: john <w4thqNOw4SPAM@msn.com.invalid>
Message-ID: <028b3b4b.5ae66056@usw-ex0102-084.remarq.com>
Source record: 62346
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Hi Jim, I found four Burroughs 6844A nixies. They have 13 pins with a gap between pins 1 and 13. The pin circle is 5/8 inch in diameter and the bulb is flat on the bottom, 1 inch in diameter, dome-shaped on the face, with an overall height of 1 inch. We used these in an old vacuum tube computer-scanner and I believe they operated on 150 volts dc with a common cathode dropping resistor. They are yours if interchangeable with the ones your have as I have no use for them. Got anything like ART-13 parts or National HRO parts to trade? 73, John W4THQ

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2188. FS: Box of various transformers,

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <WNzA4.75094$pf4.1922720@news20.bellglobal.com>
Source record: 62441

Hello to all,

I have a box of various power transformers, chokes, most have no markings.
Box weights about 40 pounds. Any interest for $ 20.00 plus shipping. John

2189. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d2d2ec.114732441@news.online.no>
Source record: 62442

On Fri, 17 Mar 2000 19:05:38 GMT, n2ey@aol.com wrote:

>
>You don't need perfect DC for a high power amp - 1% ripple is better
>than any mode requires.
>>
obviously your remarks may seem to make sense for somebody
but which importance has 10% ripple on 28 or 60VDC ...or say 3kV on
supply line to a linear amplifier? Just nothing, you need no voltage
regulation nor low ripple

73
Jan-Martin
LA8AK

2190. Re: DISH LNBs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8auo1ufqr1@nnrp1.deja.com>
Source record: 62443

In article <38D033AC.C965899B@sympatico.ca>,
Laura Halliday <va3ldh@sympatico.ca> wrote:
> Jack Taylor wrote:
>
> > Has anyone characterized a DISH network LN B to see if it will receive in
> > the 10 GHz hamband?
>
> Why not try it and see?
>
> Converted Ku-band LNBs are a staple of wideband 10 GHz operation.
> Depending on the exact frequency they will either use an image
> response in our band, or a custom DRO puck, or one with stuff
> glued to it to change the frequency. They work well.
> --
> Laura Halliday VA3LDH "Laisse le vent tout emporter..."
> Grid: FN03gs - Foly/Viennet
>
--
Has any one converted LNB'S from a Primestar dish? if so is there a URL for it?
dr.d

Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

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2191. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-18 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8aurocibs1@nnrp1.deja.com>
Source record: 62444
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew

In article <38D287DB.7795F98C@clifto.com>,
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote:
> Science Hobbyist wrote:
> > Are you only objecting to my weird "energy sucking"
> > language? Or are you also objecting to my assertion that
> > a load resistor can run hotter if a tuned circuit
> > is part of a short antenna?
>
> I'm getting the impression that you're seeing this as a special
property
> of resonance. Am I right?

Since this thread is one part of a very heated discussion that
took place earlier on sci.physics.electromag, and since there
seems to be great confusion over this topic, I want to
intentionally limit the discussion to whether
http://www.amasci.com/tesla/nearfld1.html
is correct or not.

Earlier, people seemed to be reasoning that if my EXPLANATION
of this effect was wrong, then the effect must not exist
at all! Also, several made the assertion that the effect
itself (and not just my explanation) violates fundamental
principles of physics and cannot exist. At least, that's what
their messages SEEMED to say.

To eliminate confusion and distractions, I first want to know
whether the stuff on that webpage is somewhat correct. And
to find out if it's an abomination which clearly violates
fundamental rules of physics! :) Once that's somewhat
clear, I'll go back to aruging about the proper explanation
for what's occurring. (Or perhaps drop the topic entirely,
since many people are probably getting sick of it.)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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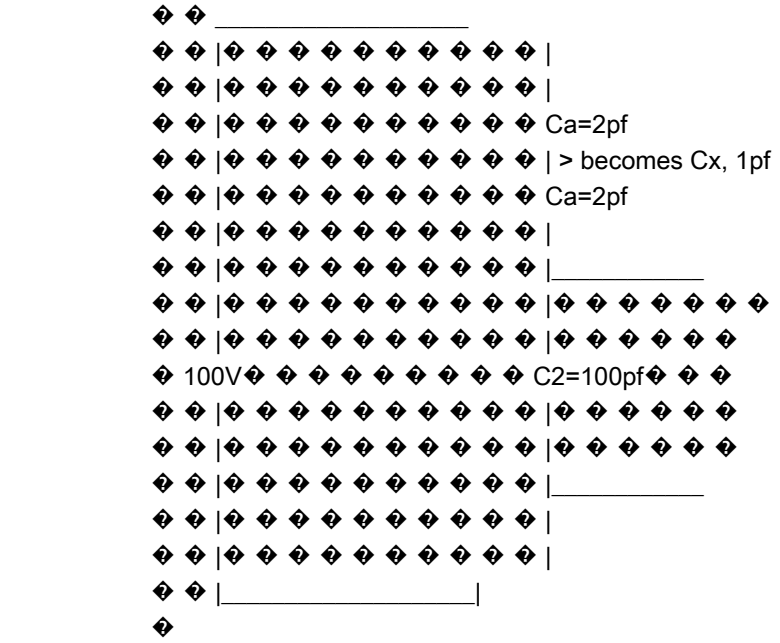
2192. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b3e50$18e$1@nnrp1.deja.com>
Source record: 62195
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <d5t8dsgo31elk7lalebbig3dpui557a858@4ax.com>,
James Meyer <notjimbob@earthlink.net> wrote:
> On Sun, 19 Mar 2000 04:11:53 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>
> > course. It is not a parallel resonant circuit as I
> > thought. This is what Russell Shaw is talking about.
>
> This is simply not possible. There is no way that your three capacitors
> can combine into one and then be in series with the inductor.
>
> Please explain, step by step, how you came to this conclusion.

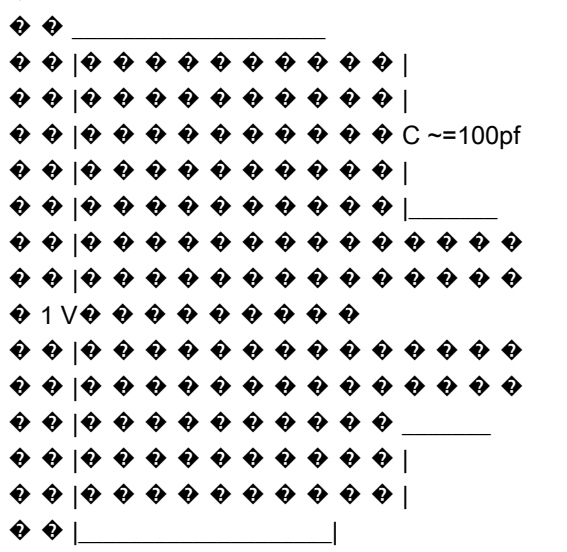
Certainly! Maybe I'm wrong about this and you'll see
the problem.

Cover up L2 and R2 temporarily to remove the
distraction (put them back in the same place later.)
First move one of the Ca capacitors through the power
supply so they are both in series. Then combine them
to form Cx, a 1pf cap.

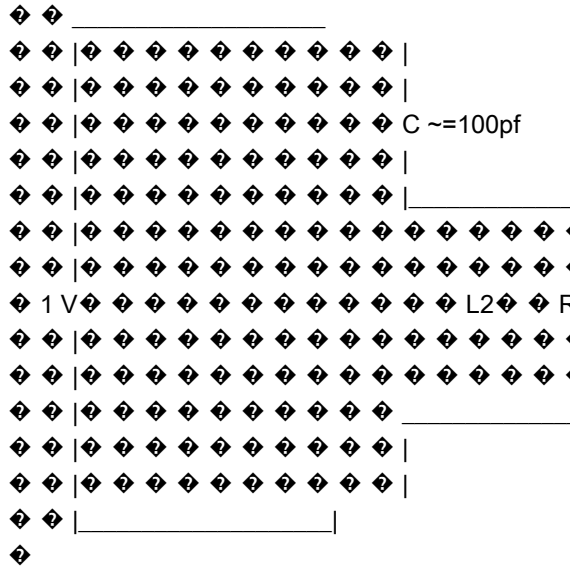


Next, note that Cx and C2 form a 100x capacitive
voltage divider. Thevinenize this, and it becomes a
smaller power supply voltage in series with a single
capacitance. (Hint: it works the same way for

resistive dividers.)



put L2 and R2 back, and there's your series LC circuit.



The power supply becomes 1v, the equivalent series
impedance becomes a single 100pF capacitor. (Or
fairly close to 100, since I'm assuming that
C2 >> Ca.)

If R2 was infinite, the voltage on L2 would
gradually rise forever, and is not limited to 1v
or 100v. If R2 is finite, then it sets a limit
for the voltage across L2-R2, and of course limits
the maximum power attainable. With large
R2, the voltage could become very large,
and in a practical circuit might cause corona,
etc. That is, it could if the real-world Q could

be made that high.

> I just finished with an interesting session with PSpice. I used it to
> simulate the original schematic with the parallel resonant tank circuit. The
> original intent was to look for any evidence of a second, series, resonance.
> There is none.

There is just one resonant FREQUENCY, but the
circuit behaves as a series resonance. Or you
could call it a resonant network, and ignore the
series/parallel considerations entirely, and just
look at its PSPICE behavior.

What would happen if you cover your ceiling with
aluminum foil, then drive it with hundreds of
volts of 500KHz referenced to ground? Small
resonant antennas could run your flashlights!
(Maybe.) Although it might be more sensible
to use the "dual" of this circuit, where a large,
high-current loop antenna has smaller resonant
loop antennas within its diameter. Wrap a
coil around your house. Don't attract the FCC!

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2193. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b3er5$1pc$1@nnrp1.deja.com>
Source record: 62196
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <6q2adskg2idsc7dssc8cv675sr02qgg15t@4ax.com>,
James Meyer <notjimbob@earthlink.net> wrote:
> On Sun, 19 Mar 2000 16:16:25 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:
>
> ><notjimbob@earthlink.net> inimitably wrote:
> >
> >> The equivalent capacitance of three capacitors in series is easy to
> >>derive. You can replace three capacitors in series with one equivalent
> >>capacitor with *no* change in the generator voltage required.
> >
> >You could do that, but it would not be correct.
>
> Three capacitors in series *can* be replaced by one equivalent capacitor
> just as three resistors in series can be replaced by one resistor. The only
> time my statement would not be correct is when there are other components
> connected to the three capacitors.

Yes, and perhaps you missed the fact that we are
discussing a circuit on a website. We are not discussing
"three capacitors", we are arguing about how a
circuit on a website behaves. Perhaps you came into
the middle of the thread. If so, then the website is
below. If not, then I have no idea what your reasoning
process might be. If you believe that the Ca-C2-Ca
capacitors on that website should be added together...

http://www.amasci.com/tesla/nearfld1.html

> It is equally hard to reach a consensus when extra assumptions are
> presumed even when simple statements are expressed.

Perhaps the "extra assumptions" are there because you
never saw the original schematic under discussion?

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
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Before you buy.

2194. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b3f6b$24e$1@nnrp1.deja.com>
Source record: 62197
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <xy9B4.2088$5b5.76278@news2-win.server.ntlworld.com>,
"Dirk Bruere" <artemis@kbnet.co.uk> wrote:

> > loss into the ground (i don't know if the basic pyramid
> > shape satisfies this criterion).
> >
> Crystals. Don't forget really big hi Q quartz crystals of the sort favoured
> by the Atlanteans.

LOL!!!!!!!

Have you ever listened to really loud 40KHz ultrasound?
After awhile, your ears start ringing, and over a longer
time it can give you nasty headaches, even though the
sound itself is far above hearing range. Imagine a
bunch of Atlanteans staggering around with throbbing
heads, not knowing what was going on. Those darn
techno-priests! They made the Crystal of Power
too big!!!!!! Go hit it with a bronze adze!

:)

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2195. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b3gs7$3bj$1@nnrp1.deja.com>
Source record: 62198
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <6LdrkQA14J14Ewne@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> <8b1ep3nuc1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> inimitably wrote:

> Unlike the situation just before the turn of the last century, when many
> eminent scientists thought that all that remained to do was to refine
> the measurements that confirmed established theories (a view that was
> overturned completely by Einstein and others in less than 10 years),

Now THAT's an interesting sci/cultural topic in itself. Horgan's
"The end of science" presents a directly opposed viewpoint,
and I suspect that many scientist agree with him. And of course
"What Remains..." by Maddox serves as an excellent response.
I wonder how the scientific community divides itself between
these two viewpoints. Is the majority composed of hyper-skeptics
who sneer at "science fiction" possibilities with great disgust?
Or is the majority more along the lines of dreamers who see
that what is not forbidden is required, and that our contemporary
ideas on what is forbidden may possibly be wrong?

Just this week I posted a note to sci.skeptic on this. It's
below. Or search on "horganism." Heh. It describes
recent events here.

--
((((((((((((((((((((O)))))))))))))))))))))
William Beaty billb@eskimo.com
SCIENCE HOBBYIST website http://www.amasci.com
BSEE/programmer/educator 206-781-3320

Sent via Deja.com http://www.deja.com/
Before you buy.

2196. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D546E5.5EFB53A@mlecmn.net>
Source record: 62199
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

James Meyer wrote:
>
> On Sun, 19 Mar 2000 09:35:57 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:
>

> >I believe that your PSpice model is predicting an upper bound on the
> >available power because the "measurement" points are not spaced closely
> >enough in frequency.
>
> PSpice automatically reduces the step sizes during simulation when it
> sees any calculated parameter changing rapidly enough to warrant smaller step
> sizes.
>
> >Since there are no other losses in the circuit, there is
> >nothing to keep the voltage across R2 from increasing without bound as
> >R2 is made larger.
>
> Voltage is not power. If you re-read what I wrote above, you will see
> that although I found that the *voltage* across the tank increases as R2
> increases, that the *power* in R2 first increases, reaches a maximum, and then
> begins to decrease as the value of R2 steadily continues to increase.
>

Power is equal to V^2/R. The voltage multiplication factor is
proportional to the Q of the circuit, and Q is proportional to R2. When
R2 is increased by a factor of 10, the power also increases by a factor
of 10. Using the PSpice simulation in MicroSim DesignLab with a sweep
range of 1 kHz and 10,000 steps, I get about 300 kV across R2 when its
value is 1000 megohms and 3 megavolts when R2 is increased to 10,000
Megohms. The voltage increase is "compressed" by about 1 per cent at the
higher resistance reading, indicating that the number of steps would
need to be increased to "catch" the resonance peak.

Lyle, K0LR

http://www.computerpro.com/~lyle

2197. DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: billb@eskimo.com
Message-ID: <8b3l1tvug1@eskinews.eskimo.com>
Source record: 62200
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Crackpot antenna theories below! Danger! Mind distortions ahead!

In article <l9jMJTBO3P14Ewm1@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> inimitably wrote:
> > Maybe you better stop reading my messages for
> > awhile.
>
> Better still, you stop answering them, and let him stew in his own
> juice.

Yep. "Intellectual bullies" need to occasionally encounter victims who don't back down, therefore it's worth continuing the fight... up to a point.

I'm still interested in clearly seeing where I ACTUALLY am wrong in this "energy-sucking" thing. But only a civilized conversation can do this. When opponents seriously believe that an idea can be defeated through ridicule, then there's no possibility of rational thought playing a role.

I'm still stunned at the number of science-types on the newsgroups who apparantly believe that ridicule is an acceptable element in a scientific discussion. If they represent science, give me a crackpot anytime.

ANYWAY, my original "crackpot claim" thought experiment went something like this:

1. EM plane waves are travelling through space.

2. Add an electrically small conductive object, and the waves are only slightly distorted as they pass nearby.

3. Make that object into a resonant antenna with high Q-factor. An enormous local EM field appears, and this field interacts with the incoming waves in the usual way (by superposition), and the sum of the plane waves with the nonradiating quasistatic fields of the nearfield region of the antenna, gives a set of plane waves with much more distorted wavefronts than a similar metallic object could ever give.

Capacitively-driven resonant antenna
http://www.amasci.com/tesla/nearfld1.html

4. Calculate the Poynting vector field, and you find that the energy flux of the incoming plane waves is diving inwards towards the resonant antenna, and leaves a fuzzy "shadow" behind it.

The antenna behaves as if it has grown to about 1/pi wavelength across. Since this only occurs at resonance when the intense local fields are present, it's as if the fields are reaching out throughout the nearfield region and "sucking in" energy from the incoming EM waves. Hence "energy sucking antennas."

At this point, Bilge and others leaped into the fray to defend science against the vile crackpot (me.) I think all of their frantic sword hackings landed only upon science herself. They had to destroy scientific integrity in order to save it, and they did, (except they didn't save it.) A totally shameful thing to behold.

But many days later, while considering somebody's point about reciprocity of absorbers/emitters, I was visualizing the small resonant antenna as a bar-magnet which flips end over end. And I saw my flaw. The quasi-static fields act like a rotating solid object. They are not the source of the "energy sucking" effect at all. The above four points require modification, and the addition of a fifth.

5. The small antenna radiates. (after all, it is generating an intense field.) This sphere-wave radiation superposes upon the incoming plane waves, and if we integrate the amount of field-energy throughout space for many wavelengths around the small antenna, we discover something: The antenna's radiation has reduced the total energy of the purely planar EM waves by superposing with the plane waves in a particular phase.

So, I was WRONG in saying that the quasistatic fields cause energy to be removed from the incoming plane waves. Instead, it is the RADIATION LEAKAGE of some spherewave EM from the tiny antenna which "removes" energy from the original plane waves. A similar thing must occur with a conventional 1/2-wave dipole too. Yes, contrary to what others here say, there are two superposed fields involved: the incoming plane waves and the sphere waves generated by the small resonator/antenna. They sum together, and the result is less energy overall. A 90deg phase relationship is required between the two wavetrains for this to occur.

"Sucking" still occurs. By radiating, the tiny antenna absorbs. Because its radiation causes energy to "vanish" from the EM waves as a whole, that energy must appear within the antenna. And so it does. The resonance voltage grows large, and the load resistor gets very hot, as if the antenna was far larger than it actually is. Momentarily short the antenna, and the resonance energy is dumped, and the "sucking" effect is momentarily halted.

This effect becomes strange at long wavelengths and high Q-factors in the resonators. A tiny resonator can "grab" energy from another one a great distance away, as long as that distance is << than 1/4 wavelength.

This effect, by analogy, can be used to explain how a 0.1nM atom can interact very strongly with 600nM radiation. It VISUALLY explains how

such tiny ammonia atoms can generate such long microwaves in ammonia masers. And, as one physics paper points out, there is even an analogy for stimulated emission hiding in this "resonant antenna" concept. If the phase of the illuminating wave should suddenly shift by 90 degrees, the oscillating resonant antenna will dump energy at a faster rate than if there were no incoming planewaves present. The plane waves can be adjusted to "suck energy" out of the tiny resonator/antenna! The two wavetrains superpose with +90 phase, and the net energy is higher, rather than lower, than with the planewaves alone.

Pretty cool, eh? Atomic physics from the viewpoint of RF engineering. And tiny antennas which, in order to receive a large flow of energy, EMIT a wavetrain of sphere waves.

So I'm *STILL* a vile heretical blasphemer who is going to destroy science, and I'll sway many weak minds with my disgusting propaganda! You can also scare little children to make them behave: if they don't go to bed right right this minute, the PSEUDOSCIENTIST will come and suck out all of your electromagnetic spherewave fluxes!!!

large :) !

On pseudoscience, etc.
http://www.amasci.com/weird/wclose.html

On explaining electricity
http://www.amasci.com/ele-edu.html

Some odd science projects
http://www.halcyon.com/sciclub/kidproj1.html

Some totally crackpot science projects
http://www.amasci.com/weird/const.html

Recent additions
http://www.amasci.com/news.html

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--
((((((((((((((((((((((((((O))))))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science

2198. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <bnNjv8B2CV14Ewht@jmwa.demon.co.uk>
Source record: 62201
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8b3e50$18e$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>Although it might be more sensible
>to use the "dual" of this circuit, where a large,
>high-current loop antenna has smaller resonant
>loop antennas within its diameter. Wrap a
>coil around your house. Don't attract the FCC!

But if you use a frequency like 500 kHz and enough current in the loop
to transmit appreciable power, you WILL attract the FCC. The field
strength outside the loop falls with distance but is far from negligible
even at, say, ten loop widths outside the loop.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2199. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <1nhovDCGTV14EwFf@jmwa.demon.co.uk>
Source record: 62202
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8b3gs7$3bj$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>For example, if a skeptic argues that psychic powers are
>ï¿½ impossible on the grounds that no known forces/energy
>ï¿½ can produce such phenomena, that can be Horganism.ï¿½
> Skeptics can assume that there cannot be such forces,
> since science is at its end, and the discovery of such
> forces at this late date is a revolution which simply
> cannot occur.
>ï¿½
I really can't devote time to this sort of extended discussion. A
sceptic who argues that something is impossible because no *known* force
can cause it has adopted a wholly untenable position by implicitly
assuming that we know about all the forces that exist. We can NEVER know
that we have found all of them. The sustainable position is 'Present
scientific knowledge cannot furnish an explanation for psychic powers,
and until such powers can be demonstrated in such a way as to allow a
rational scientific theory to be developed, I choose to assume that no
such powers exist.'

For 'psychic powers', you may substitute 'time travel' (probably) and
several other alleged phenomena.

Most of the critics of your web page don't understand what they are
attempting to discuss, and will never agree with you (or are dissembling
just to provoke arguments), so further discussion is futile. I repeat
that what you claim regarding the two circuits is true, mildly
interesting and has practical applications. It has been known for nearly
100 years.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2200. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <5ldB4.2625$5b5.92081@news2-win.server.ntlworld.com>
Source record: 62203
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

Science Hobbyist <bbeaty@microscan.com> wrote in message
news:8b3f6b$24e$1@nnrp1.deja.com...
> In article <xy9B4.2088$5b5.76278@news2-win.server.ntlworld.com>,
> "Dirk Bruere" <artemis@kbnet.co.uk> wrote:
>
> > > loss into the ground (i don't know if the basic pyramid
> > > shape satisfies this criterion).
> > >
> > Crystals. Don't forget really big hi Q quartz crystals of the sort
favoured
> > by the Atlanteans.
>
> LOL!!!!!!!
>
> Have you ever listened to really loud 40KHz ultrasound?
> After awhile, your ears start ringing, and over a longer
> time it can give you nasty headaches, even though the
> sound itself is far above hearing range. Imagine a

When I did something like that with about 25kHz just moving/turning the head
produced some weird effects.

> bunch of Atlanteans staggering around with throbbing
> heads, not knowing what was going on. Those darn
> techno-priests! They made the Crystal of Power
> too big!!!!!! Go hit it with a bronze adze!

If it was 7Hz fundamental, how big would it have to be?

Anyway, looked at your site and briefly considered this sort of thing about
3 yrs ago when I was designing a battery charger using resonant coupling
instead of contacts.

I've probably missed quite a bit of this thread, so excuse me if it's been
answered already. What experimental results do you have?

Dirk

Dirk

2201. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <%ndB4.2630$5b5.91304@news2-win.server.ntlworld.com>
Source record: 62204
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

russell shaw <russell@webaxs.net> wrote in message
news:38D55D3E.B670289@webaxs.net...
> As it happens, if you impact a beam of photons (single freq laser) on
> a single slit, the interference pattern will be visible on a projection
> plate, with bands predicted by the 2D fourier transform of the metal slit
> structure.
>
> If you reduce the beam to one photon at a time, and repeat the strikes
many
> times over, the probability density of strikes on the projection screen
still
> produces the banded structure!
>
> People have wondered how this can happen when its supposed to be an
interference
> pattern, but what other photons can the single photons interfere with?
>
> This has lead to some people postulating alternate
dimensions/universes/timelines
> are supplying the extra photons momentarily.

For those who are interested in serious weirdness, do a search on 'quantum
non demolition measurement' and 'quantum eraser'.

Dirk

2202. Re: Toroid Core Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38D5690D.C6AA4770@eznec.com>
Source record: 62205

Reg Edwards wrote:
>
> Measure DC resistance between two needle probes. If less than 1 Megohm
> or so throw it away.
> . . .

If it measures less than 1 megohm, it's a high-permeability ferrite, excellent for use as a core for a wideband transformer, balun, or EMI suppression choke.

Roy Lewallen, W7EL

2203. Re: Subject: Weird stuff: tiny resonant antennas

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: "Neal N." <nealn@alpha1.net>
Message-ID: <yAhB4.9404$oc.296303@news5.giganews.com>
Source record: 62206

I haven't been following this thread but is this discussion about the NMR (Nuclear Magnetic Resonance) effect. I personally witness hydrogen atoms "receiving" and "transmitting" RF almost daily. NMR is the basis for MRI (Magnetic Resonance Imaging).

73,

Neal N.
NE5AL

William Fuqua wrote in message
<4.2.0.58.20000315083359.009fecc0@pop.uky.edu>...
>Ok, now that you have discussed the receiving properties of atoms how about
>transmitting properties. If an atom emits some sort of radiation what would
>be the direction, and is it in the form of photons or EM waves?
>
>73
>Bill wa4lav
>

2204. Radio plans?

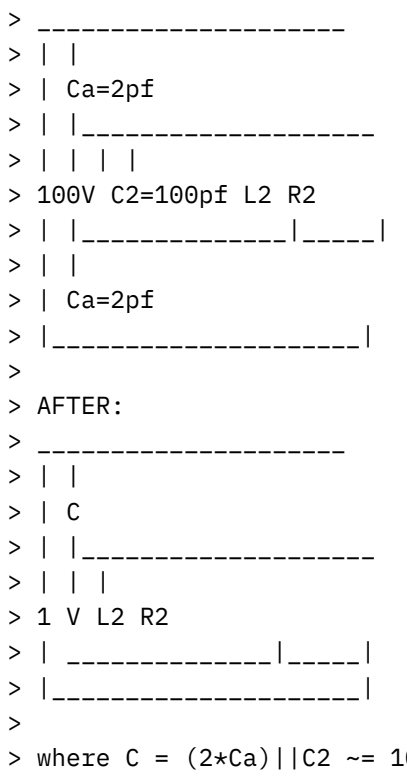
Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Calvin Patrick <linhack@freewwweb.com>
Message-ID: <38D5D6BA.4EC18E65@freewwweb.com>
Source record: 62207

I'm looking to get started into Amateur Radio, an was wondering where would be a good place to start, and where I could get the plans to build my own radio.

2205. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8b5n8ovcc1@nntp9.atl.mindspring.net>
Source record: 62208
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <8b1q3mvbi1@nnrp1.deja.com>,
Science Hobbyist <bbeaty@microscan.com> wrote:



AFTER:

where C = (2*Ca)||C2 ~= 100pF

> See the series-resonant circuit? If not, then I don't think I can help you.

No.

C2-L2 will reduce down to a two terminal network that looks like
an inductor below resonance and a capacitor above resonance. If the
resonant frequency of L2 and the combined capacitance of the two Ca (1
pf) is higher than the resonant frequency of C2-L2, there's no inductive
reactance seen in series with Ca.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

2206. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8b5n8fohi1@slb6.atl.mindspring.net>
Source record: 62209
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <8autgojgu1@nnrp1.deja.com>,
Science Hobbyist <bbeaty@microscan.com> wrote:
>In article <38D20A75.92DE9693@webaxs.net>,
>russell shaw <russell@webaxs.net> wrote:
>> The very simple error is your calculation of 320kohms for the
>> resonant case. The real answer is infinity kohms (ie: bigger
>> is better).
>
> I think I see now.
>
> Instead of being limited to 100V, the voltage across the
> (lossless) inductor will rise towards infinity, right?
> Put a large resistance across the parallel LC circuit
> (or a much smaller resistance in series), and you can
> extract as much energy as you want. In theory.

No, not in theory. The basic definition of Q is the ratio of energy stored in the reactances of the resonant circuit to the energy lost per cycle. (Or is that per radian? Oh well, just a scale factor).

It doesn't matter whether the energy is lost to inherent resistances in the components, or is lost to radiation resistance where the components of the circuit act as antennas, or is extracted in a load. All the energy you take out sets the Q of the circuit. The more you take, the lower the Q.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

2207. Re: Which is better choke or no choke??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d38467.160174805@news.online.no>
Source record: 62347

On 18 Mar 2000 12:30:32 GMT, n2ey@aol.com (N2EY) wrote:

>
>All factors have to be considered. Efficiency is important - but so is cost,
>size, ripple, voltage variation from full-to-no-load, and component
>availability. The "best" design is useless if you can't get the parts.
>
Radio amateurs are too often FOOLS, when you give them some surplus
eqiuipment they start to dissolve the parts, and decide which they
will use and which they won't.
Give them a high quality signal generator, and one week later it
doesn't exist any more
A year later they may decide to build a power supply, and since they
did not save all the parts they must make something simple, while I
prefer to use the units more or less as they come.

If you give them a commercial power supply, they would first remove
all parts, and keep the transformer for later use, and since they
didn't keep the swinging coil (regarded as some rubbish) they have to
use the transformer alone, too high voltage may be a problem, so they
have to look for another transformer...

have some old swinging chokes from 2kW coast station transmitter and
RCA TV-transmitter (2800V anode voltage with 4x 8122)
seems to be very interesting for some friends doing EME (LA8YB & Co),
I was pleased to get rid of it, and they were pleased to get it....

was an article in Radcom about power supplies, and it was described
how - even a small inductor of 20mH could make the 14V 25A psu more
efficient and reduce the inrush current

Seems most amateurs building power supplies are newbies, they wish to
have something simple, every extra component is difficult.

Have used some -30V 2A power supplies with swinging chokes and shunt
regulators for packet radio digitpeaters on QTH's were electricity is
quite unstable. The vltage is stabilized to -24V. The power supplies
are surplus, quite heavy, but useful for this application, somebody
else with less experience wouldn't even dream of using such old
rubbish, even when it is very much room for it.
With swinging chokes you never have a problem of inrush current,
my argument is "use them if you have them" and
such power supplies are sometimes easy to find, I had some at work
more than enough for the 5 or 6 digipeater points I serviced

73 jan-martin LA8AK

2208. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D42B2E.4A346F8A@webaxs.net>
Source record: 62348
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Gary Coffman wrote:
>
> On Sat, 18 Mar 2000 21:22:47 +1000, russell shaw <russell@webaxs.net> wrote:
> >Gary Coffman wrote:
> >>
> >> On Sat, 18 Mar 2000 03:34:48 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
> >> >In article <38D20A75.92DE9693@webaxs.net>,
> >> >russell shaw <russell@webaxs.net> wrote:
> >> >> The very simple error is your calculation of 320kohms for the
> >> >> resonant case. The real answer is infinity kohms (ie: bigger
> >> >> is better).
> >> >
> >> > I think I see now.
> >> >
> >> > Instead of being limited to 100V, the voltage across the
> >> > (lossless) inductor will rise towards infinity, right?
> >> > Put a large resistance across the parallel LC circuit
> >> > (or a much smaller resistance in series), and you can
> >> > extract as much energy as you want. In theory.
> >>
> >> If you have infinite Q, then in infinite time you'd have
> >> infinite voltage (assuming your source is a perfect
> >> current source, which it never will be). But of course
> >>
> >^ Constant voltage source in the example, no current limit.
>
> Ok, if it is a constant voltage source, then the voltage is
> finite, fixed, and limited from the get go. That's by definition
> of what a constant voltage source is.
>
> >> you don't have infinite Q, even if the capacitor and
> >> inductor are lossless, because R isn't infinite. The
> >> *loaded* Q of the circuit limits the voltage rise to
> >> a finite value.
> >>
> >^ Q *approaches* infinity as RL->infinity, and then Pload->infinity.
>
> Ok, and for a constant voltage source, current through RL approaches
> zero as RL approaches infinity. Note that this is just the opposite of
> what happens with a constant current source.

^ Incorrect. As RL is increased, more power will be dissipated in RL.

>
> >> You don't have infinite time either, you have 1/(2f).
> >> After 1/(2f) reradiation begins, and energy is lost by
> >> the antenna.
> >
> >^ The discussion is on the capacitor plate system where far-field
> >effects are not being considered (eg: tesla coil).
>
> What does that have to do with frequency? Energy only builds in
> the system during a half cycle. The following half cycle the field
> collapses and energy is reradiated.

^ Negative. At resonance, power is being delivered from the source over
all the sinewave cycle, because at resonance, the input impedance of
the network is a pure resistance.

>
> >> Note, if you have a constant voltage source instead of a
> >> constant current source, then that obviously limits the
> >> voltage rise to less than infinity.
> >
> >^ Incorrect. The voltage approaches infinity asymtotically
> >using a constant voltage source.
>
> Nonsense. By definition the voltage of a constant voltage
> source stays fixed, finite, and constant. Only in the case of
> an ideal constant current source can the voltage approach
> infinity.

^ The source voltage stays fixed, but with RL=infinite, the
system has (eg, 1kHz resonance) a double pole at j1000 and a
double pole at -j1000. The output waveform of this system is
thus a sinewave with linearly increasing (ramp-up) envelope
that goes up forever.

>
> >For a current, voltage is only infinite for open circuit.
>
> Correct. For a constant current source, voltage is infinite
> for an open circuit. That is *not* true for a constant voltage
> source, however.
>
> >> But if it is a perfect
> >> constant voltage source (it won't be) then current can
> >> rise toward infinity as R tends toward zero.
> >
> >The example assumes constant voltage source. Also, if RL=0,
> >Iload is finite.
>
> Assuming a constant voltage source, then by definition current
> goes to infinity as RL goes to zero. This is simple Ohm's Law
> stuff.

^ As RL->0, Rin->infinity because the circuit is an impedance
inverter. Note that for the lower RL (about when Q=3 for the
LC tuned circuit), the resonance effect gets swamped out and
the impedance inversion is no longer true.

>
> >> But all real sources are power limited, so there are no
> >> infinities. With a constant current source, at some point
> >> the current starts to decline because you've run into the
> >> voltage limits of the supply. With a constant voltage
> >> source, voltage begins to sag as you run into the current
> >> limits of the supply.
> >
> >^ The example is using ideal sources.
>
> Fine. Just make up your mind what you mean by ideal source.
> You seem very confused between what is meant by a constant
> voltage source and what is meant by a constant current source.
> You should also realize that neither actually exists in real systems.

Yes but the example stated ideal components were used.

>
> All real systems are power limited. They may have characeristics
> of a constant voltage or constant current source at low power
> levels, but as you approach the limit conditions, they become
> power limited and no longer behave as constant voltage or current
> sources. This is true even with ideal components. Real component
> losses only make matters worse.
>
> Gary
> Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
> 534 Shannon Way | We break it |
> Lawrenceville, GA | Guaranteed |

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2209. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1brr$m70$1@nnrp1.deja.com>
Source record: 62349
Cross-posted to: sciphysics.electromag,rec.radio.amateur.homebrew

CROSSPOSTING FROM SCI.ELECTRONICS.DESIGN, SEE BELOW

In article <38D20A75.92DE9693@webaxs.net>,
russell shaw <russell@webaxs.net> wrote:
> The very simple error is your calculation of 320kohms for the
> resonant case. The real answer is infinity kohms (ie: bigger
> is better).
>
> The resonant network is an inverse impedance transformer, so
> the higher the load resistance, the lower the resistance
> presented to the source.
>
> At resonance, the source sees a pure resistance. Because the
> source is a constant voltage type, then obviously more power
> is delivered by minimizing the resistance presented to the
> source (hence higher load resistance).
>
> The tradeoff is that the Q gets higher, so bandwidth is lower.
> If the center freq=1kHz, and Q=10000, the response time to step
> changes in the transmitter level is a time-constant of 3.183s,
> ie:quite sluggish.
>
> As you can imagine, the entire system is engulfed in the resonant
> condition.
>
> Loop antennas are limited by losses in themselves, and objects near
> them.
>
> There is nothing strange or unknown in these resonance effects or
> calculations; i use and think about them frequently.
>
> You will realize all these effects are present and used when designing
> narrow bandpass filters from lightly coupled hi-Q resonators.
>
> Science Hobbyist wrote:
> >
> > I'm holding off on discussing my ideas, and instead looking
> > for something very simple: major errors on the website:
> >
> > http://www.amasci.com/tesla/nearfld1.html
> >
> > If they are there, I cannot see them, but perhaps
> > somebody here will see things I miss.

> >
> > --
>
> --
> **
> * Russell Shaw, B.Eng, M.Eng(Research) *
> * Electronics Consultant *
> * email: russell@webaxs.net *
> * Australia *
> **
>
--
((((((((((((((((((((((O)))))))))))))))))))))
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Sent via Deja.com http://www.deja.com/
Before you buy.

2210. "energy-sucking antennas": find my dastardly ploy?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: billb@eskimo.com
Message-ID: <8b1bga$68a$1@eskinews.eskimo.com>
Source record: 62350
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge (root@radioactivex.lebesque-al.net) wrote:

: > Notice that I'm not claiming anything yet. I'm only
: > asking some simple questions.
: >
: Just simple enough to include the obfuscation.

And ***there*** is our problem. I honestly am trying to cut to the heart of our argument, and you apparantly believe my website contains some hidden "gotcha" or some sort of obfuscation. As long as that situation exists, all discussion is pointless. Anything I do will look like a suspicious ploy to you.

So far nobody has found a FATAL flaw in my reasoning on that website. You've stated that http://www.amasci.com/tesla/nearfld1.html contains obfuscation, and unneccesary extra components, but have not said what these are. Why not? Do they disprove my conclusion that an intense e-field appears adjacent to C2? If my website is wrong, and you know the reason, it is a simple matter to state what it is. On the other hand, accusations that are not backed up by explanations look like namecalling. If for some reason you HATE what my website depicts, then that has nothing to do with finding flaws in my reasoning or errors in my conclusions.

Yes, I am trying to prove a point. But at the moment, the point involves only the contents of that website and nothing more. Once it is clear that the e-field near the C2 plates becomes intense, and R2 runs hotter, then we move on to the next simple stage and ask whether a similar thing occurs when both antennas are illuminated by EM waves from a distant transmitter.

If it occurs with EM waves as well, does it prove that my "energy sucking" explanation of small, resonant receiving antennas is right? OBVIOUSLY NOT!

You may believe I'm trying to trick you. Actually, I'm trying to clearly expose my chain of reasoning. If it is sound, then the flaw must be in my explanation, rather than in my assertion that adding a resonant circuit to a short receiving antenna will cause an intense e-field to arise near that antenna, and also will let a load resistor receive immensely higher energy than if the resonator was not there.

: To quote einstein
: "make it as simple as possible, but no simpler". Since all of
: the physics is in the inner stuff, it doesn't seem like you can
: remove the outer plates without eliminating the obfuscatory
: capability of the design.

Yes, this is a very important point. If it's true that R2 gets hotter than R1 as shown on my website, DOES THIS STILL OCCUR if those same antennas are instead illuminated by RF radiation from a distant transmitter? I'm sure that this question has a real answer. (I thought I knew the answer, but since people here are raising such a huge stink about this, and even denying that it occurs, I realized I'd better make sure.)

: > plates C1 or C2. These later can serve as a simplified
: > model of an electrically short dipole antenna, and C1 and
:
: No. By antenna I meant ox cart. sheesh. One capacitor serves that
: purpose. Two does not unless your purpose is to describe two dipoles
: with different dipole moments that are capacitively coupled and then
: pretend it isnt.

My first purpose is to find out if R2 gets hotter than R1 in the situation described on that website. People here have questioned whether it occurs, or even insisted that it does not. If it does occur with nearby metal plates, then next I must ask, does it occur with EM travelling waves? Does a very intense e-field arise near the antenna when a resonator is connected to it? If the answer is yes, then I've clearly shown that "energy-sucking antennas" describes a REAL PHENOMENON. No amount of alternate interpretations will make that phenomeon go away. This of course says nothing at all about whether my explanation is bogus or not.

: > or pursuing implications. I only want to get some agreement
: > that it actually occurs in the setup that I've shown.
: >
: I made it simpler. I let you use any ratio you want. I dont fucking care.
: Use P1 and P2 for christ's sake. jeeez. If that doesnt do it for you
: and this ratio of 100:1 is drop-forged into your skill, I cant help --

My question regards whether R2 gets significantly hotter than R1. The particular ratio is not an issue, unless it turns out to be so low that R2 ISN'T significantly hotter.

: I'm not a brain surgeon. I know when it's time to cut my losses on
: a pointless time sink that's already taken more time from pounding my head
: into the sidewalk than it deserves.

Very well.

: > I can make the results of this thought-experiment be
: > anything I like?
:
: That's why people refer to them as "thought experiments". If you'd
: like limitations, go buy some parts and build a real one.

If all thought experiments are total fantasies, then they have nothing to do with science, and it's amazing that researchers would ever find them useful. What would happen if a patent examiner rode along with a light beam? Nothing! It's useless fantasy.

If you assert that thought experiments can be ignored on the grounds that anybody can create any results which are convenient, then like magic you win the debate. Like magic my website becomes a suspicious ploy meant only to confuse. But I'm not trying to "win," I'm just trying to be heard, and to discuss something which is fascinating to me, and above all to find just where my errors lie. I have no great terror of being proved wrong in public. But it will take far more than "debating tactics" to do this.

If my website is fatally flawed, and no intense e-field appears at the C2 plates, please describe this flaw in simple terms so that even a fool such as I will understand.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science

2211. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D43252.9F20D2D6@webaxs.net>
Source record: 62351
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In first case, source current is

70Vrms/320k= 219uArms

Total load= sqrt(3.2k^2 + 3.2k^2)= 4.53k

Load volts= 219uA x 4.53k= 1 Vrms

Power R1= 1^2/3.2k = 312.5uW

In the resonant case, the conditions for significant
voltage magnification using resonance are not met.
In particular, Ccoup=1pF or 320k, same as R2. You
should redo the example with R2 >> 320k ohms.

Anyway, we'll assume C2-L1 is resonant. Therefore,

Isource= 70Vrms/(1.414 x 320k) = 155uA.

Power R2= 155uA^2 x 320k = 7.7mW or 24.6 times P(R1).

This is a trivial result because the second case simply
doesn't have the voltage division of the first case.

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2212. Re: Kris Mach 3B or Boomer Amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Jeff Santee <jeff352@home.com>
Message-ID: <KmWA4.1242$iP4.50126@news1.rdc1.il.home.com>
Source record: 62352
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.cb,rec.radio.swap

K8TJ <tje@usol.com> wrote in message
news:g547dsknlge7jb4ud26716mrtgv0pe1gmf@4ax.com...
> Looking for an Kris Mach3B or Boomer 600 amplifier. Want to try
> converting one for 6 meter use. Please let me know what you have and
> your asking price. Thanks.
> --
> Tim, K8TJ
>

Tim

I have an old Afterburner amp that has already been converted to 6
meters
if your interested.

Jeff

2213. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D43392.8466DFE8@webaxs.net>
Source record: 62353
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge wrote:
>
> >
> >Who said anything about photons? If i put a magnet near a ball-bearing,
> >and cause the ball-bearing to start rolling along a flat surface, i have
> >transferred energy to it. Any photons?
> >
>
> Uh, yes. How do you think the force between the magnet and
> ball takes place?

I have merely created a distortion in the space-time continuum, and the ball-bearing is simply following the shortest path thru space-time :) (a tongue-in-cheek example of gravity).

Anyways, if i attracted the ball-bearing with gravity (by tilting the surface), there's definitely no photons here! (light-switch...OFF).

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2214. Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1dp2nfk1@nnrp1.deja.com>
Source record: 62354
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <38D20A75.92DE9693@webaxs.net>,
russell shaw <russell@webaxs.net> wrote:
> The very simple error is your calculation of 320kohms for the
> resonant case. The real answer is infinity kohms (ie: bigger
> is better).
>
> The resonant network is an inverse impedance transformer, so
> the higher the load resistance, the lower the resistance
> presented to the source.

Bing! A light dawns.

On http://www.amasci.com/tesla/nearfld1.html, the small Ca
coupling capacitances can be combined with the C2 antenna
capacitance to form a Thevenin equivalent circuit with the
power supply. Now the power supply is a voltage source
with a single 100pF capacitance in series, driving an
inductor. In other words, it has become a SERIES
RESONANCE rather than a parallel resonance. I missed
this before.

What happens when an ideal voltage source is connected
to a LC series resonance? The current rises continuously
without limit. And the voltage across the C2 and L2
also rises continuously without limit. WITHOUT LIMIT.
It can immediately exceed the 100V drive voltage if
R2 is a very large value. If we place a small resistor
R2 across L2, the voltage will asymptotically approach
a low level, and the power in R2 will be low. If we
place a very large resistor R2 across L2, then the
voltage will approach a much higher level, and the
power in R2 will be much higher. Or, we could make
L2 part of a stepdown transformer, and convert the
output to whatever current/voltage we desired.
Coolness!

Is this right?

As before, it means that a tiny antenna can intercept
a huge amount of energy if the antenna is a resonator,
and if the Q is ridulously large. Correct? (And yes,
it means that it might take a long time for the
resonance to build up to the final value.

Now HERE'S an interesting thought. The earth's ionosphere is somewhat conductive, causing the earth's atmosphere to behave as a resonant chamber with modes at multiples of approx. 7Hz, called the "Shumann Cavity." This cavity has a resonance at almost exactly 60Hz, and it is accidentally pumped by the continental power grids. (Uh, who decided on the 60Hz standard anyway?) All over the earth there is a weak 60Hz field which is caused by the trapped standing waves of 60Hz EM radiation.

The field is weak, but that means nothing to a high-Q electrically small antenna. Such antennas essentially make their own "high power" fields during the process of signal reception.

What if I build a fairly large superconductor coil a few hundred meters across and attach it to a high voltage capacitor bank... and then tune it to 60Hz? At 60Hz, a quarter wavelength is more than 1000KM. If I allow a really immense resonant voltage to build up across my capacitor, my SC loop antenna will essentially "STEAL POWER" from all the electric companies within 1000KM. And better yet, because of the Schumann cavity, the "antenna" might interact with power grids farther away, and grab energy from them as well! Arrg! Those darned europeans, they settled on 50Hz as a standard. Oh well, I'll just have to draw my megawatts from the USA/Canadian power system.

Once long ago somebody told me that some engineering students in a college dorm had built a device which could extract enough 60Hz energy out of the wiring in the building that it could run a small flashlight bulb. I thought this was totally ridiculous. The ambient b-field in a dorm room doesn't have the energy needed to run a light bulb, no matter WHAT the antenna might look like.

I was wrong.

I wonder if they did something like dunk a big inductor in liquid nitrogen in order to lower the resistance of the copper? Maybe with a large enough inductor (very thick wire, big long core) such cooling would be unnecessary.

Hmmm, what to use as the core? Maybe a big wad of long steel welding rods, to form laminations which eliminate eddy current losses. The longer the core, the better it works, no?

Horrible thought: maybe the power companies are well
aware of this possibility. If my system starts
"broadcasting" an immense b-field at 60Hz, will the
cops automatically appear at my door?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
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Sent via Deja.com http://www.deja.com/
Before you buy.

2215. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1ep3nuc1@nnrp1.deja.com>
Source record: 62355
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <mAacWBAugy04EwcD@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> <8av1apltn1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> inimitably wrote:

> This is an age-old problem. Yes, there are people who wish
to 'preserve
> order' by suppressing 'inconvenient' facts. These days, in electrical
> science, they usually get short shrift if they are found out, but some
> can disguise their stance and get away with it for some time. I recall
> about 20 years ago a recurrence of the 'flux linking/flux cutting'
> argument and a proposal to stop telling students about, for example,
> Faraday's Disc, and other constructions that highlight the subject. It
> was not favourably received!

Jeeze, I wasn't aware that actual "supression" was ever
attempted! But it doesn't suprise me. Among physics
educators, belief systems are even stronger than
among fundamentalist christians. You should see the
nastiness that goes on about whether "heat" exists.
Or about the "one true way" to explain how an airfoil
generates lift. Aside from my resonant-antenna flamewar,
we're even seeing a bit of it here when people insist
that fields and EM waves don't really exist, and the One
True Way to explain anything is with photon exchange.

Swift had it right in Gulliver's Travels: the
Lilliputians really do want to eliminate their rivals
over the correct way to crack an egg. The "big-endian"
stuff is deadly serious to some people.

> > Can an electrically small antenna intercept much more
> > energy when it has a resonator, than if it does not? Simple
> > question. And contrary to those who loudly insist that
> > the answer is not interesting, I think that it is.
>
> Yes, it can, and it is mildly interesting.

The contents of those two physics papers are even more
interesting. The one about dipoles supposedly shows
how stimulated emission can be explained from a
wave-based viewpoint. Vile blasphemy which must be
stamped out? If their views are correct, then whenever
an electrically small transmitter antenna is hit by
incoming EM waves of the same frequency and a

particular phase, the antenna EMITS more energy than
it otherwise would.

If true, then when someone claims that stimulated
emission is exclusively a quantum phenomenon which
can only be analyzed in terms of particles... they
are wrong. I doubt this will destroy physics as
we know it. But its always nice to learn something
that isn't already in all the textbooks. It gives
one hope that science isn't at its end, and there
still might lurk some REALLY big things in the
undergrowth.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2216. Re: FA Transco "Y" SP4T--One Day Remaining

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38d43831.126849286@news.azstarnet.com>
Source record: 62356
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur,antenna,rec.radio.amateur.space

On Fri, 17 Mar 2000 19:47:40 -0800, John Klewer <n6ax@pacbell.net> wrote:

Hmmm. I've never seen a Transco "Y" relay with latching coils.
>

2217. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1fsqolh1@nnrp1.deja.com>
Source record: 62357
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

In article <c1t3ds4imedbrkumtcdojbbk9ln8n79pd7@4ax.com>,
James Meyer <notjimbob@earthlink.net> wrote:
> On Fri, 17 Mar 2000 06:12:43 GMT, Science Hobbyist
<bbeaty@microscan.com> wrote:

> > Another "interesting" thing: when C2 and L1 are tuned to
> > resonance, the voltage across the small C2 antenna plates
> > suddenly becomes very large. Unless my calculations are
> > wrong, it grows to 70 volts instead of 0.7v. And the
> > e-field in the vicinity of the C2 plates grows as well,
> > of course. We don't see a large voltage with C1 and R1,
> > and we don't see a large voltage when the resonant circuit
> > is tuned away from 500KHz. We don't see large e-fields
> > in the space between the big metal plates EXCEPT
> > around the small antenna which is tuned to resonance.
>
> True, the e-field between the large plates is disturbed more when a
> resonant device is inserted in the field. That e-field disturbance
doesn't mean
> that more energy is somehow created though.

ENERGY CREATED? WHAT? How can a radio receiver
create energy??????

> > It's ALMOST as if the C2-L2 circuit had become a
> > signal generator, and was getting energy from somewhere
> > in order to power itself.
>
> That's a leap of faith or wishful thinking.

You misunderstand. If C2-L2 behaves as signal generator,
it is getting its drive right from the power supply
connected to the large metal plates.

What I mean to say is, suppose you were walking around
in a very weak RF field but didn't realize it was there.
If somebody built a high-Q resonant antenna, then
whenever that passive antenna was tuned just right, it
would SEEM to generate an intense signal without using
a power supply. In reality, it extracts energy from
the unobtrusively weak ambient field, and builds up a
huge oscillation.

As for perpetual motion machines, a resonant antenna
could make for a good hoax. For example, if you had

a huge copper coil a few thousand pounds in mass,
and hooked it up to some sort of electrmechanical
resonator such as a rotating permanent magnet... and
then chopped it at 60Hz... you might be able to
extract a tiny amount of power from a mysterious
source, which actually turns out to be the power
lines outside the house, or perhaps the ground-
leakage current from some unbalanced neutral in
the neighborhood. Know any Free Energy devices
which resemble this? :)

> All the energy delivered to
> the resonant circuit comes from the generator attached to the big
plates.

Obviously.

> > Is the size of an aperature merely a question of impedance
> > matching? Changing the resistance of the tiny piece of
> > "space cloth" doesn't fix the problem when its diameter
> > is far smaller than 1/4 wavelength. Electrically short
> > antennas have the same trouble. They act like physically
> > tiny aperatures, and it doesn't matter what sort of
> > resistance is placed within the "hole". If the "hole" is
> > too small, the EM waves cannot go in. Unless...
>
> Unless you take quantum mechanics into consideration. The smaller you
> make something, the less sure you can be of its size and/or position
in space.

This applies to radio waves too. A 1" metal disk is
almost invisible to 10-meter EM waves, just as a
0.1 nanometer atom is almost invisible to 500nM light.
The uncertainty principle has EVERYTHING to do with
both. Or neither, if you want to think exclusively in
terms of classical fields/waves theory.

> It's called the uncertainty principle and it's been thoroughly
investigated and
> "proven".
>
> Single photons presented one at a time to the classical two-slit
> diffraction experiment *still* produce interference patterns although
there are
> no other photons present to interfere with.
>
> Now *that's* interesting. But it's still not a convincing argument for
> zero-point energy or a vindication of Tesla's crack-pot schemes.

I'm not aware that Tesla ever claimed to have any perpetual-
motion inventions. Contact with Mars yes, "Free Energy" no.
His biggest "crackpot" scheme was to flood the entire earth

with 10KHz radiation, then extract significant amounts of
power at great distances without using acres of receiving
antennas. Could this have worked? It all depends on
ionospheric heating losses and leakage to space. And on
the achievable Q's of little bitty resonant loop antennas.

--
((((((((((((((((((((((O)))))))))))))))))))))
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Sent via Deja.com http://www.deja.com/
Before you buy.

2218. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d8hql.fi3.root@radioactivex.lebesque-al.net>
Source record: 62358
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>In article <vh3TOOPIkv0LbLwpeVXyy9aWAW23@4ax.com>,
>
> The power supply depicted on that webpage is a
> constant voltage source. Until I see some agreement
> that the power in R2 is actually higher than the
> power in R1, I am not interested in any other circuits
> but the ones depicted.

You aren't interested regardless.

>
> If we remove the large metal plates shown on
> http://www.amasci.com/tesla/nearfld1.html and

Start without them in the first place. They're superfluous...

> is the e-field adjacent to the C2 plates still
> significantly greater than the e-field adjacent
> to the e-field near C1?
>

...then you cant be confused about what happens when they're
removed, unless the intent is antenna legerdemain or you
dont even understand the properties of a capacitor. If
the outer plates are a constant voltage source, remove
them and use wires to the inner plates.

> I'm not discussing photons. That is a distraction which
> can easily obscure these issues rather than illuminate

You arent even discussing E&M. If the photons confuse you,
start with halliday & resnick, and work your way up.

> them. I'm discussing these two simple antennas in term of
> EM fields and EM waves. If you believe that EM waves do

No, you're discussing how you can fool yourself when you're
in over your head. Anyone that believes in photons believes
in E&M waves, in case that isn't obvious for some reason.
It's a real useful way to keep from wandering off into wonderland
and ending up with a ridiculous description of some phenomenon
so that you can return to earth and look for more conventional
explanations before shouting eureka.

> not exist, or that for some reason we cannot talk about
> them (and must only discuss photons?) then there is little

> point to this debate.
>

There's little point anyway. If you cant make the connection
between the wave and particle aspects and have some ability
to switch between descriptions when it is advantageous to
do so, like when one picture provides a vast simplification
over the other, and you clearly cant, then you have no business
discussing anything related to fields.

2219. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1k20$r9q$1@nnrp1.deja.com>
Source record: 62359
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <qcXTOL6hNekFnaytA0IeztUx=wi3@4ax.com>,
Gary Coffman <ke4zv@bellsouth.net> wrote:
> On Sat, 18 Mar 2000 21:22:47 +1000, russell shaw <russell@webaxs.net>
wrote:
> >Gary Coffman wrote:

> Ok, if it is a constant voltage source, then the voltage is
> finite, fixed, and limited from the get go. That's by definition
> of what a constant voltage source is.

Right, but what happens when a constant voltage source
drives a SERIES RESONANT circuit? What happens to
the voltage across the inductor? Does it only rise
to the level of the drive voltage?

I think you'll find that it rises continuously.

My mistake with http://www.amasci.com/tesla/nearfld1.html
was to ignore the fact that the two Ca capacitors and the
C2 capacitor can combine into a Thevenin equivalent
of a single capacitance. This capacitance then appears
IN SERIES with the power supply and with the inductor
as well, while R2 is still across the conductor of
course. It is not a parallel resonant circuit as I
thought. This is what Russell Shaw is talking about.

In a series resonant circuit driven by a constant voltage
source, the series current rises continously, and the
voltage across the capacitor and the inductor rises
continously, even though the voltage across the whole
series resonator remains constant. On my website, the
power supply is 100V. But this does not limit the
voltage across R2. Instead that voltage is limited only
by the q-factor of the circuit as a whole, and the voltage
can be very much higher than 100V

> What does that have to do with frequency? Energy only builds in
> the system during a half cycle. The following half cycle the field
> collapses and energy is reradiated.

You are wrong where resonant circuits are concerned.
Note that I said CIRCUITS. There is no "radiation"
going on, there is only the usual sorts of capacitors,
inductors and resistors. A resonant circuit need not
return all energy back to the power supply on each

cycle. Instead, energy builds up cycle by cycle, and
voltages and currents increase continuously.

> Assuming a constant voltage source, then by definition current
> goes to infinity as RL goes to zero. This is simple Ohm's Law
> stuff.

Apply ohms law to a series-resonant RLC circuit. The results
might amaze you. They're still amazing me.

> Fine. Just make up your mind what you mean by ideal source.
> You seem very confused between what is meant by a constant
> voltage source and what is meant by a constant current source.

No, the problem is miscommunication: Mr. Shaw is assuming
that you are talking about series resonance as he is, while
you are assuming that he is talking about ohm's law applied
to resistors. I suspect that each of you thinks the other
is not only wrong, but willfully ignorant. But its just
miscommunication.

> All real systems are power limited.

Certainly. If it offends you to connect a zero-ohm resistor
to an ideal voltage source, then whenever you see someone
about to do this in their minds... run!!! :)

--
((((((((((((((((((((((O)))))))))))))))))))))
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Sent via Deja.com http://www.deja.com/
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2220. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D45262.AA7C0377@webaxs.net>
Source record: 62360
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>
> In article <38D20A75.92DE9693@webaxs.net>,
> russell shaw <russell@webaxs.net> wrote:
> > The very simple error is your calculation of 320kohms for the
> > resonant case. The real answer is infinity kohms (ie: bigger
> > is better).
> >
> > The resonant network is an inverse impedance transformer, so
> > the higher the load resistance, the lower the resistance
> > presented to the source.
>
> Bing! A light dawns.
>
> On http://www.amasci.com/tesla/nearfld1.html, the small Ca
> coupling capacitances can be combined with the C2 antenna
> capacitance to form a Thevenin equivalent circuit with the
> power supply. Now the power supply is a voltage source
> with a single 100pF capacitance in series, driving an
> inductor. In other words, it has become a SERIES
> RESONANCE rather than a parallel resonance. I missed
> this before.

^ Yes, the input impedance looks like that of a series resonant
circuit.

Note that circuits like this can have more than one mode of operation.

I made a mistake in my last message, making a wrong assumption (tho the
analysis for that given mode should be correct).

In first case, source current is

70Vrms/320k= 219uArms

Total load= sqrt(3.2k^2 + 3.2k^2)= 4.53k

Load volts= 219uA x 4.53k= 1 Vrms

Power R1= 1^2/3.2k = 312.5uW

In the second case, the circuit at a certain resonant frequency is
equivalent to a voltage source of 0.693Vrms driving a series 101pF
cap, a series 1.003mH inductor (for fo=500kHz), and a 31ohm load
resistance. Therefore,

P(R2)= 0.693^2/31 = 15.5mW. Therefore, increase of 49.6 times.

> What happens when an ideal voltage source is connected
> to a LC series resonance? The current rises continuously
> without limit. And the voltage across the C2 and L2
> also rises continuously without limit. WITHOUT LIMIT.
> It can immediately exceed the 100V drive voltage if
> R2 is a very large value. If we place a small resistor
> R2 across L2, the voltage will asymptotically approach
> a low level, and the power in R2 will be low. If we
> place a very large resistor R2 across L2, then the
> voltage will approach a much higher level, and the
> power in R2 will be much higher. Or, we could make
> L2 part of a stepdown transformer, and convert the
> output to whatever current/voltage we desired.
> Coolness!
>
> Is this right?

^ Correct.

> As before, it means that a tiny antenna can intercept
> a huge amount of energy if the antenna is a resonator,
> and if the Q is ridulously large. Correct? (And yes,
> it means that it might take a long time for the
> resonance to build up to the final value.

^ Correct.

> Now HERE'S an interesting thought. The earth's
> ionosphere is somewhat conductive, causing the earth's
> atmosphere to behave as a resonant chamber with modes
> at multiples of approx. 7Hz, called the "Shumann
> Cavity." This cavity has a resonance at almost exactly
> 60Hz, and it is accidentally pumped by the continental
> power grids. (Uh, who decided on the 60Hz standard
> anyway?) All over the earth there is a weak 60Hz
> field which is caused by the trapped standing waves of
> 60Hz EM radiation.
>
> The field is weak, but that means nothing to a
> high-Q electrically small antenna. Such antennas
> essentially make their own "high power" fields during
> the process of signal reception.
>
> What if I build a fairly large superconductor coil
> a few hundred meters across and attach it to a high
> voltage capacitor bank... and then tune it to 60Hz?
> At 60Hz, a quarter wavelength is more than 1000KM. If
> I allow a really immense resonant voltage to build up

> across my capacitor, my SC loop antenna will
> essentially "STEAL POWER" from all the electric
> companies within 1000KM. And better yet, because of
> the Schumann cavity, the "antenna" might interact
> with power grids farther away, and grab energy from
> them as well! Arrg! Those darned europeans, they
> settled on 50Hz as a standard. Oh well, I'll just
> have to draw my megawatts from the USA/Canadian power
> system.

^ Correct. This is what i figured of teslas thoughts years ago
(tesla coil ELF transmitter, tesla coil receivers).

>
> Once long ago somebody told me that some engineering
> students in a college dorm had built a device
> which could extract enough 60Hz energy out of the
> wiring in the building that it could run a small
> flashlight bulb. I thought this was totally ridiculous.
> The ambient b-field in a dorm room doesn't have the
> energy needed to run a light bulb, no matter WHAT
> the antenna might look like.
>
> I was wrong.
>
> I wonder if they did something like dunk a big
> inductor in liquid nitrogen in order to lower the
> resistance of the copper? Maybe with a large
> enough inductor (very thick wire, big long core) such
> cooling would be unnecessary.
>
> Hmmm, what to use as the core? Maybe a big wad of
> long steel welding rods, to form laminations which
> eliminate eddy current losses. The longer the
> core, the better it works, no?
>
> Horrible thought: maybe the power companies are well
> aware of this possibility. If my system starts
> "broadcasting" an immense b-field at 60Hz, will the
> cops automatically appear at my door?

^ How about a very large mass (a pyramid ?) with attached
force transducers to convert low-level/low-freq magnetic
component of an em-wave into mechanical force? By choosing
suitable points for the transducers, a dominant mode of
mechanical resonance can build up, accumulating energy.
Also, choose a mode of resonance such that the base of the
structure is preferentially not moving, to minimize energy
loss into the ground (i don't know if the basic pyramid
shape satisfies this criterion).

>
> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William Beaty bbeaty@microscan.com
> Software Engineer http://www.microscan.com
> Microscan Inc., Renton, WA 425-226-5700 x1135
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--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2221. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <86k8dssj9ijqr2tp68tld0sclrq2c02rki@4ax.com>
Source record: 62361
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 02:24:40 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

> On http://www.amasci.com/tesla/nearfld1.html, the small Ca
> coupling capacitances can be combined with the C2 antenna
> capacitance to form a Thevenin equivalent circuit with the
> power supply. Now the power supply is a voltage source
> with a single 100pF capacitance in series, driving an
> inductor. In other words, it has become a SERIES
> RESONANCE rather than a parallel resonance. I missed
> this before.

I think you missed it because it isn't there in the first place.

The whole point about Thevenin (and Norton) equivalent circuits is that
you can replace one configuration of circuit elements with another, but in order
to be equivalent, the electrical characteristics of the circuits must remain the
same.

In other words, you can have a whole collection of "black boxes" with
any number of equivalent circuits inside them, but unless the electrical
characteristics of any black box can *not* be distinguished from any other box
in the collection, then the internal circuits are *not* equivalent.

Jim

2222. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d8m9a.fi3.root@radioactivex.lebesque-al.net>
Source record: 62362
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>I have merely created a distortion in the space-time continuum, and the ball-
>bearing is simply following the shortest path thru space-time :) (a tongue-in-
>cheek example of gravity).
>

It's not unreasonable to assume a geometric picture of E&M. Kaluza
and Klein first tried it in the 1920's except that it didn't pan out
and as of yet, no one has such a model that works. So at the moment,
it's hard to apply the concept to antennas.

>Anyways, if i attracted the ball-bearing with gravity (by tilting the surface),
>there's definitely no photons here! (light-switch...OFF).

Light and radiaation are real (on mass-shell) photons. The fields
corresponding to the static E & B fields are virtual. The magnet
and ball exchange virtual photons. Light bulbs emit real ones.
You can apply the same picture to gravity by picturing the mass as
a sort of gravitational "charge", except that there's only 1 type,
carried by gravitons and the force is always attractive (unless
something is found to fall up).

2223. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D45B35.901FA5A6@webaxs.net>
Source record: 62363
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

You can transform one circuit to another equivalent at a *single*
frequency, so that certain impedances are unchanged. For different
frequencies, you have to re-evaluate the transformation.

James Meyer wrote:
>
> On Sun, 19 Mar 2000 02:24:40 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>
> > On http://www.amasci.com/tesla/nearfld1.html, the small Ca
> > coupling capacitances can be combined with the C2 antenna
> > capacitance to form a Thevenin equivalent circuit with the
> > power supply. Now the power supply is a voltage source
> > with a single 100pF capacitance in series, driving an
> > inductor. In other words, it has become a SERIES
> > RESONANCE rather than a parallel resonance. I missed
> > this before.
>
> I think you missed it because it isn't there in the first place.
>
> The whole point about Thevenin (and Norton) equivalent circuits is that
> you can replace one configuration of circuit elements with another, but in order
> to be equivalent, the electrical characteristics of the circuits must remain the
> same.
>
> In other words, you can have a whole collection of "black boxes" with
> any number of equivalent circuits inside them, but unless the electrical
> characteristics of any black box can *not* be distinguished from any other box
> in the collection, then the internal circuits are *not* equivalent.
>
> Jim

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2224. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>
Source record: 62364
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>In article <mAacWBAugy04EwcD@jmwa.demon.co.uk>,
>

> Or about the "one true way" to explain how an airfoil
> generates lift.

Sorry, but you can explain it at many levels, but at the
very lowest level, you're stuck with one explanation -
statistics. It doesnt happen to be the most convenient
way to design a fan, but a new theory of energy sucking
fans has to be in agreement, explain where and why it
differs, or else go figure out where they went wrong.
You cant decide air molecules dont exist because they
dont fit your theory of sending large volumes of "cooling
waves" with a small fan and dont want to use a faster
motor and change the blade shape from that of a large fan.

> that fields and EM waves don't really exist, and the One
> True Way to explain anything is with photon exchange.
>
Those being?

> can only be analyzed in terms of particles... they

It's sufficient to analyze something it in whatever way
is easiest. If it isn't true in a particle picture it isn't
true in a wave picture since they are alternative pictures
of the same thing.

> are wrong. I doubt this will destroy physics as
> we know it. But its always nice to learn something
> that isn't already in all the textbooks. It gives

It helps to find out what's in textbooks before you
conclude things aren't there.

> one hope that science isn't at its end, and there
> still might lurk some REALLY big things in the
> undergrowth.

Despite the promotion of psuedoscience. Just because you've
been told (by everone in this case) you're wrong doesnt mean
you're ideas are supressed. In this case, it means your
energy sucking antenna is conceptually flawed. So far, everyone
has given you a the reason for getting the numbers you got,
but you are too busy objecting to the explanation to notice they

agreed. Mainly because you aren't interested in agreement unless they'll agree to the way you were going to explain it had they not explained it first. So far, no one has disputed your numbers, they've only explained them such that you're left with a dead end. live with it. If you were being supressed, you wouldn't be reading this. You're being told you're concept is wrong. That's MY idea, and I dont intend to supress it.

Amazing how being wrong is called "supression" as a last resort.

2225. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1q3mvbi1@nnrp1.deja.com>
Source record: 62365
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <86k8dssj9ijqr2tp68tld0sclrq2c02rki@4ax.com>,
James Meyer <notjimbob@earthlink.net> wrote:
> On Sun, 19 Mar 2000 02:24:40 GMT, Science Hobbyist
<bbeaty@microscan.com> wrote:

> I think you missed it because it isn't there in the first place.

Please look again. In particular, convert the power supply,
the Ca capacitors, and the C2 capacitor into their Thevenin
equivalent. This gives you a power supply with less
voltage and a single series capacitance.

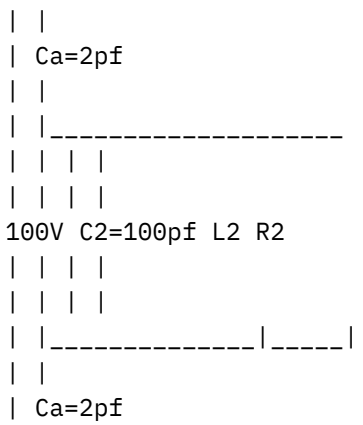
> The whole point about Thevenin (and Norton) equivalent circuits is
that
> you can replace one configuration of circuit elements with another,
but in order
> to be equivalent, the electrical characteristics of the circuits must
remain the
> same.

Hey, I've used them before. A bit. I've only been
an engineer since 1980. But in the digital world,
old courses about RF engineering get pretty fuzzy.

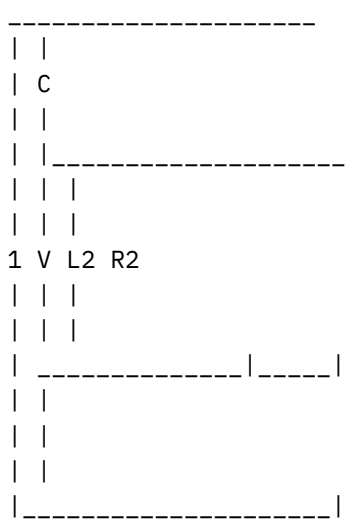
Rather than just talking, go perform the conversion on
that circuit and what happens. You end up with a single
C in series with a power supply of smaller voltage, which
is also in series with L2.

If you cannot do this in your head, here's a crude diagram:

BEFORE:



AFTER:



where C = (2*Ca)||C2 ~= 100pF

See the series-resonant circuit? If not, then
I don't think I can help you.

--
((((((((((((((((((((((O)))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2226. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8b1umk$2ad$1@nnrp1.deja.com>
Source record: 62366
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> Despite the promotion of psuedoscience. Just because you've
> been told (by everone in this case) you're wrong doesnt mean
> you're ideas are supressed. In this case, it means your
> energy sucking antenna is conceptually flawed.

This may be so, but until I hear you agree to two things,
I can see no point to further discussion. Those two
things are:

1. On the website, the power in R2 is much higher
than the power in R1.

2. On the website, the e-field adjacent to the
C2 plates is much stronger than the e-field adjacent
to the C1 plates.

The reason that I keep harping on these two points is
that I've NOT heard you agree that they are correct.

I've heard you raise all sorts of objections to the
simple contents of the website, stating that there are
unnecessary components present, or that the website is
misleading and obfuscating, or that I can create any
numbers I wish in those two circuits. But you've never
said that yes, in the situation as depicted, if the
components are adjusted for maximum power, the e-field
near C2 is far more intense that that near C1, and the
power in R2 is far higher that the power in R1. Will
admitting that I am right on these two points damage
you in some way? What's the problem?

Others seem willing to continue the discussion, and to
do so without descending into base emotions and turning
themselves into flamers, therefore I shall continue.

> So far, everyone
> has given you a the reason for getting the numbers you got,
> but you are too busy objecting to the explanation to notice they
> agreed.

I very specifically notice that they agreed, but that you
have not. Very very strange.

> If you were being supressed, you wouldn't be reading this.

Ah, I'm a pseudoscientist, therefore I MUST be complaining
about being suppressed. That's what all pseudoscientists
do, right? Those pseudoscientist, they're all the same!
Don't we HATE them! Better not let your daughter marry
one. :)

> Amazing how being wrong is called "supression" as a last resort.

The only "suppression" I see here is your very strange
behavior, as if you wish to shut me up in any way possible,
rather than simply finding the flaw in my website.
You seem to be becoming extremely emotional and have
repeatedly descending into namecalling. Do you lack self
control? Maybe you better stop reading my messages for
awhile.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2227. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d8u8c.fi3.root@radioactivex.lebesque-al.net>
Source record: 62367
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>In article <qcXTOL6hNekFnaytA0IeztUx=wi3@4ax.com>,

> Right, but what happens when a constant voltage source
> drives a SERIES RESONANT circuit? What happens to
> the voltage across the inductor? Does it only rise
> to the level of the drive voltage?
>
Power is transferred. The voltage can be anything.
I*V is what matters. Take a piece of coax and put
a BNC "T" at one end and connect it to a signal
generator at the middle of the T and put a shorting
plug on the end of the "T". Measure the voltage
at the injection point and at the open end. Tune
through a resonance "oddly enough, if you cut the
the coax to some length, it will occur where the
frequenct corresponds 4L). Magic, huh?

>> What does that have to do with frequency? Energy only builds in
>> the system during a half cycle. The following half cycle the field
>> collapses and energy is reradiated.
>
> You are wrong where resonant circuits are concerned.

No. He is not wrong. He's completely correct.

> Note that I said CIRCUITS. There is no "radiation"
> going on, there is only the usual sorts of capacitors,

There's a field in the capaacitor. As the supply switches polarity,
the charges flow back the other way. Do you have the vaguest
notion of how a capacitor works? Why it has a frequenct dependent
impedance?

> inductors and resistors. A resonant circuit need not
> return all energy back to the power supply on each
> cycle. Instead, energy builds up cycle by cycle, and
> voltages and currents increase continuously.
>

That's called frying your circuitry. The cause is using
conductors that are incapable of returning the charge.
When the wire can no longer carry the current due to
the higher potential differences from the increasing
accumulation of charge, poof. If you put Q in and only
take .5 Q out, the next cycle sees a potential difference

due to 1.5 Q.

> Apply ohms law to a series-resonant RLC circuit. The results
> might amaze you. They're still amazing me.
>
Just think how much more amazing it would be to really exploit
them.
>
>> All real systems are power limited.
>
> Certainly. If it offends you to connect a zero-ohm resistor
> to an ideal voltage source, then whenever you see someone
> about to do this in their minds... run!!! :)
>

It's not a problem, if you treat the resulting infinite current
flow correctly, i.e., you cant use the results to provide detailed
information about a real system. See and proof that 1 = 2, for
why.

2228. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <17v8dsca1r1uicqc2lg4g2vq90t19e9c62@4ax.com>
Source record: 62368
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 14:44:37 +1000, russell shaw <russell@webaxs.net> wrote:

>You can transform one circuit to another equivalent at a *single*
>frequency, so that certain impedances are unchanged. For different
>frequencies, you have to re-evaluate the transformation.

Yes, that's true. But have you seen the "equivalent" circuit that
science hobbyist came up with? It's nowhere near equivalent at any frequency.

Jim

2229. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <d5t8dsgo31elk7lalebbig3dpui557a858@4ax.com>
Source record: 62369
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 04:11:53 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

> My mistake with http://www.amasci.com/tesla/nearfld1.html
> was to ignore the fact that the two Ca capacitors and the
> C2 capacitor can combine into a Thevenin equivalent
> of a single capacitance. This capacitance then appears
> IN SERIES with the power supply and with the inductor
> as well, while R2 is still across the conductor of
> course. It is not a parallel resonant circuit as I
> thought. This is what Russell Shaw is talking about.

This is simply not possible. There is no way that your three capacitors
can combine into one and then be in series with the inductor.

Please explain, step by step, how you came to this conclusion.

I just finished with an interesting session with PSpice. I used it to
simulate the original schematic with the parallel resonant tank circuit. The
original intent was to look for any evidence of a second, series, resonance.
There is none.

Interestingly enough, the voltage across the tank circuit can rise far
above the value of the generator voltage if the value of R2 is increased to very
large values. It's still a parallel resonant circuit.

The value of R2 sets the "Q" of the tank circuit. As the Q rises with
increased values of R2, the voltage across the tank increases. However, the
power in R2 doesn't rise without limit. There is a value for R2 that maximizes
the voltage across it at the same time that the current through it maximizes the
power. That maximum occurs when the voltage across the tank reaches about 300
Volts and the resistor value is around 1 Meg Ohm.

As soon as I can figure out how to set up the "Optimizer" utility in
PSpice, I'll post the results. If my math skills were better, I'd just write
the equation for the circuit and solve for max power in R2 directly.

Stay tuned for further developments.

Jim

2230. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <3gu8ds47aao9id5b80s6sdluo2u5hfjdar@4ax.com>
Source record: 62370
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 05:55:07 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

>In article <86k8dssj9ijqr2tp68tld0sclrq2c02rki@4ax.com>,
>James Meyer <notjimbob@earthlink.net> wrote:
>> On Sun, 19 Mar 2000 02:24:40 GMT, Science Hobbyist
><bbeaty@microscan.com> wrote:
>
>> I think you missed it because it isn't there in the first place.
>
>
> Please look again. In particular, convert the power supply,
> the Ca capacitors, and the C2 capacitor into their Thevenin
> equivalent. This gives you a power supply with less
> voltage and a single series capacitance.

The equivalent capacitance of three capacitors in series is easy to
derive. You can replace three capacitors in series with one equivalent
capacitor with *no* change in the generator voltage required.

> Rather than just talking, go perform the conversion on
> that circuit and what happens. You end up with a single
> C in series with a power supply of smaller voltage, which
> is also in series with L2.

You do not, no way, no how, wind up with anything like your "before" and
"after" pictures.

> See the series-resonant circuit? If not, then
> I don't think I can help you.

Well, one of us definitely needs help.

Jim

P.S. Where's Win Hill when you *really* need him? 8-)

2231. Re: Knight P-2 SWR/Power meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38D4A53C.2EB1C85C@clifto.com>
Source record: 62371
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

KC2DLA Paul wrote:
> I just purchased a Knight model p-2 SWR meter. I was told that it
> will handle 1.5kw (which I am not interested in) and that it is good up to
> 225MHz. I popped off the cover of the RF sensing unit(which is separate
> from the meter) and noticed that the lead through for the coax is entirely
> shielded, which says to me that it could accurately measure SWR up to
> 225MHz.

I put mine together in 1966, but if I remember right that's not a shield,
that's the center conductor itself. Note the two solder joints at the
connectors; IIRC the instructions had you wire a small wire into the
SO-239 center pin, then bend it and push the tube on over it, then solder
the wire to the tube.

The readings from mine compare favorably to Bird wattmeter readings and
readings from much more expensive SWR bridges up to 225 MHz. Don't know
if it goes higher.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

2232. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8d9a3n.i6v.root@radioactivex.lebesque-al.net>
Source record: 62372
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>
> The reason that I keep harping on these two points is
> that I've NOT heard you agree that they are correct.
>
I've told you repeatedly under what conditions those numbers
are correct, but I wont provide you with an option to manipulate
the circumstances. You;ve already demonstrated you have no idea
how your own curcuit works and repeatedly equate situations
which are not equivalent. I have no intention of having to
unwind your convoluted logic once you start equating what I
say to what you think it means. If you cant grasp what I've
written, tough.

> unnecessary components present, or that the website is
> misleading and obfuscating, or that I can create any
> numbers I wish in those two circuits. But you've never

> said that yes, in the situation as depicted, if the

Because you dont understand what you've even depicted. I'm not
going to let you take an unqualified answer to imply for example
that your idiotic use of external capacitors has any sort of
properties whatsoever as anything out of context, in which case
you cant try and make an analogy out of it. I'm not going to
let you make an analogy from something I didn't say. I specified
exactly what the results would be under what conditions. You
get both or neither. If you cant figure that out, settle for
neither and simply live with it.

> Others seem willing to continue the discussion, and to
> do so without descending into base emotions and turning
> themselves into flamers, therefore I shall continue.
>
That is their perogative.

> I very specifically notice that they agreed, but that you
> have not. Very very strange.
>
The only part that is strange is you cant read.

>
> Ah, I'm a pseudoscientist, therefore I MUST be complaining
> about being suppressed. That's what all pseudoscientists
> do, right? Those pseudoscientist, they're all the same!

No. Some are smart enough to make money as con artists.

> The only "suppression" I see here is your very strange
> behavior, as if you wish to shut me up in any way possible,
> rather than simply finding the flaw in my website.

I gave you the results. If youu're to blind to read it, there's
not much I can do. You take the circumstances along with them.
When you turn this problem into something that has no resemblence
to this one, I wont have to backtrack.

> You seem to be becoming extremely emotional and have
> repeatedly descending into namecalling. Do you lack self
> control? Maybe you better stop reading my messages for
> awhile.

And have you pass off that crap? No such luck. Sue me.

2233. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38d4aa71.5322127@news.eunet.yu>
Source record: 62373
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to servis_za_elektroniku@iname.com

2234. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <hrvtMIA$lJ14EwHa@jmwa.demon.co.uk>
Source record: 62374
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<38D43392.8466DFE8@webaxs.net>, russell shaw <russell@webaxs.net>
inimitably wrote:
>
>Bilge wrote:
>>
>> >
>> >Who said anything about photons? If i put a magnet near a ball-bearing,
>> >and cause the ball-bearing to start rolling along a flat surface, i have
>> >transferred energy to it. Any photons?
>> >
>>
>> Uh, yes. How do you think the force between the magnet and
>> ball takes place?
>
>
>I have merely created a distortion in the space-time continuum, and the ball-
>bearing is simply following the shortest path thru space-time :) (a tongue-in-
>cheek example of gravity).
>
>Anyways, if i attracted the ball-bearing with gravity (by tilting the surface),
>there's definitely no photons here! (light-switch...OFF).

That is obviously a troll. Magnetic attraction/repulsion CAN be
explained by exchange of photons, although it is unusual to do that. But
no-one understands gravity and the hypothetical particle that mediates
it, the graviton, remains undiscovered.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2235. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <qLbvENAtvJ14EwF5@jmwa.demon.co.uk>
Source record: 62375
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

<8b1dp2nfk1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>What if I build a fairly large superconductor coil
> a few hundred meters across and attach it to a high
> voltage capacitor bank... and then tune it to 60Hz?
> At 60Hz, a quarter wavelength is more than 1000KM. If
> I allow a really immense resonant voltage to build up
> across my capacitor, my SC loop antenna will
> essentially "STEAL POWER" from all the electric
> companies within 1000KM. And better yet, because of
> the Schumann cavity, the "antenna" might interact
> with power grids farther away, and grab energy from
> them as well! Arrg! Those darned europeans, they
> settled on 50Hz as a standard. Oh well, I'll just
> have to draw my megawatts from the USA/Canadian power
> system.

Yes, you could do that. The snag, of course is 'superconducting'. You
need a big cooling plant for your coil, and a superconductor that
remains superconducting in the presence of the immense magnetic field
your coil will generate. There are a few practical difficulties like
that which may very well compromise the economics of your fiendish plan!
>
>
> Once long ago somebody told me that some engineering
> students in a college dorm had built a device
> which could extract enough 60Hz energy out of the
> wiring in the building that it could run a small
> flashlight bulb. I thought this was totally ridiculous.
> The ambient b-field in a dorm room doesn't have the
> energy needed to run a light bulb, no matter WHAT
> the antenna might look like.

It is indeed unlikely that one could get enough energy from the field in
a dormitory, even if the application of American wiring rules allowed
the 'go' and 'return' paths to be widely separated. But a split-ring
current transformer attached to the wiring would very likely work.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2236. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <6LdrkQA14J14Ewne@jmwa.demon.co.uk>
Source record: 62376
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8b1ep3nuc1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>But its always nice to learn something
> that isn't already in all the textbooks. It gives
> one hope that science isn't at its end, and there
> still might lurk some REALLY big things in the
> undergrowth.

Unlike the situation just before the turn of the last century, when many eminent scientists thought that all that remained to do was to refine the measurements that confirmed established theories (a view that was overturned completely by Einstein and others in less than 10 years), scientists these days have a much better appreciation of how much we still don't know. It can reliably be estimated to exceed by far what we already know.

For example, we know that quantum entanglement exists, but we have very little idea of how it works and what the implications are. And we don't understand time at all.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2237. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <4ryrcXAL7J14EwEd@jmwa.demon.co.uk>
Source record: 62377
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>If it isn't true in a particle picture it isn't
> true in a wave picture since they are alternative pictures
> of the same thing.

Please explain 'interference', using particles.

--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2238. Need plans/website for paddle, bug, keyer, etc.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: jockokelley@my-deja.com
Message-ID: <8b2phj$j9s$1@nnrp1.deja.com>
Source record: 62378

I want to build a CW setup with a keyer and a nice little set of paddles or a bug or whatever. I am new to CW and want to get started with a nice little homebrew setup that will work well. Can anyone point me in the right direction? I especially would like to know if there are any good websites out there that will help with this sort of thing.

Sent via Deja.com http://www.deja.com/
Before you buy.

2239. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Zorn Jr Robert L <zorn@bucknell.edu>
Message-ID: <Pine.OSF.3.91.1000319093150.9781A-100000@coral.bucknell.edu>
Source record: 62379
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

I have 12 Wang part no. 340-0004 nixie-type displays.
13 pins with 3 pins in the center area of the base.
If anybody can use these please email.

2240. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D4F3DD.E558BA3D@mlecmn.net>
Source record: 62380
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

James Meyer wrote:
>

>
> The value of R2 sets the "Q" of the tank circuit. As the Q rises with
> increased values of R2, the voltage across the tank increases. However, the
> power in R2 doesn't rise without limit. There is a value for R2 that maximizes
> the voltage across it at the same time that the current through it maximizes the
> power. That maximum occurs when the voltage across the tank reaches about 300
> Volts and the resistor value is around 1 Meg Ohm.
>
> As soon as I can figure out how to set up the "Optimizer" utility in
> PSpice, I'll post the results. If my math skills were better, I'd just write
> the equation for the circuit and solve for max power in R2 directly.
>

I believe that your PSpice model is predicting an upper bound on the
available power because the "measurement" points are not spaced closely
enough in frequency. As the Q increases, it becomes increasingly
important to do the circuit calculations at the _exact_ resonant
frequency. Since there are no other losses in the circuit, there is
nothing to keep the voltage across R2 from increasing without bound as
R2 is made larger.

--
Lyle, K0LR

http://www.computerpro.com/~lyle

2241. Re: Toroid Core Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8b2toe$753$1@neptunium.btinternet.com>
Source record: 62381

Measure DC resistance between two needle probes. If less than 1 Megohm
or so throw it away.

Measure inductance of a few or many turns. These modern hand-held
antenna analysers are very good. If it can be tuned to HF then measure
Q at several HF frequencies.

If Q is less than about 150 then don't use it in a tuned power
situation such as a PA tank or antenna tuner.

Reg

2242. Deep Cycle Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: dm <dmandjos@olypen.com>
Message-ID: <k27B4.8439$oc.253563@news5.giganews.com>
Source record: 62382
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am looking for solid information on the use of Deep Cycle Storage Batteries in (1) Cool Weather, above freezing, and (2) Cold Weather, from Zero Celcius down to Minus Ten Celcius.....

E-Mail or 'Group replies appreciated N 7 D M

2243. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <nNDMFLBNzP14Ewk0@jmwa.demon.co.uk>
Source record: 62383
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

<8b1q3mvbi1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
> See the series-resonant circuit? If not, then
> I don't think I can help you.

Quite right, and that equivalence is independent of frequency. So is the
Norton equivalent, which has a current generator in parallel with a
parallel-tuned circuit.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2244. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <gN2NVOBZ1P14EwlH@jmwa.demon.co.uk>
Source record: 62384
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

<3gu8ds47aao9id5b80s6sdluo2u5hfjdar@4ax.com>, James Meyer
<notjimbob@earthlink.net> inimitably wrote:
>>James Meyer <notjimbob@earthlink.net> wrote:
>>> On Sun, 19 Mar 2000 02:24:40 GMT, Science Hobbyist
>><bbeaty@microscan.com> wrote:
>>
>>> I think you missed it because it isn't there in the first place.
>>
>>
>> Please look again. In particular, convert the power supply,
>> the Ca capacitors, and the C2 capacitor into their Thevenin
>> equivalent. This gives you a power supply with less
>> voltage and a single series capacitance.
>
> The equivalent capacitance of three capacitors in series is easy to
>derive. You can replace three capacitors in series with one equivalent
>capacitor with *no* change in the generator voltage required.

You could do that, but it would not be correct. SH is using Thï¿½venin's
theorem, and it would appear that you are not familiar with it, hence
you will never reach a consensus.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2245. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <l9jMJTBO3P14Ewm1@jmwa.demon.co.uk>
Source record: 62385
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8b1umk$2ad$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
> Maybe you better stop reading my messages for
> awhile.

Better still, you stop answering them, and let him stew in his own
juice.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2246. OT-Drake R4B-T4XB question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <38D4FD46.E862EC1B@lafn.org>
Source record: 62386

Sorry for Off-topic, but need you advise from Drake Equipment owners.

I need the email address for the Drake Group List server.

My Drake R4B receiver that has an intermittent Mode Switch.

Cleaning with contact cleaner has never permanenatly cured the need
to rotate the mode switch many times to make the RX perform.

Question is should I repair or sell?

Looks like a major job to replace that multi-deck rotary switch
and realign the receiver. Am I wrong? Are these switches available?

Also have a working T4XB.
Want to find someone who can use these fines radios.
Suggestions are welcome.

73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

2247. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: quatsein@island.net
Message-ID: <38d50d4e.42067008@news.cr.island.net>
Source record: 62387

You may want to try Intellicad 2000 at,

http://www.cadopia.com/

Seve Carlisle

On 8 Feb 00 05:38:11 GMT, af389@lafn.ORG (David Shalita) wrote:

>Hi,
>
>Can you folks identify a low cost CAD software I can
>use to make general mechanical drawings, QRP cabinet layouts,
>ALTOID Tin layouts, lawn layouts, etc?
>
>Shareware would be the best but do not limit recommendations.
>
>Thanks and 73, W6MIK
>--
>David Shalita (Dave)
>af389@lafn.org
>Van Nuys, CA

2248. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <do1adskmi3sqapi2b2sdirqlrbmm0h0jl1@4ax.com>
Source record: 62388
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 09:35:57 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:

>James Meyer wrote:
>>
>> The value of R2 sets the "Q" of the tank circuit. As the Q rises with
>> increased values of R2, the voltage across the tank increases. However, the
>> power in R2 doesn't rise without limit. There is a value for R2 that maximizes
>> the voltage across it at the same time that the current through it maximizes the
>> power. That maximum occurs when the voltage across the tank reaches about 300
>> Volts and the resistor value is around 1 Meg Ohm.
>>
>
>I believe that your PSpice model is predicting an upper bound on the
>available power because the "measurement" points are not spaced closely
>enough in frequency.

PSpice automatically reduces the step sizes during simulation when it
sees any calculated parameter changing rapidly enough to warrant smaller step
sizes.

>Since there are no other losses in the circuit, there is
>nothing to keep the voltage across R2 from increasing without bound as
>R2 is made larger.

Voltage is not power. If you re-read what I wrote above, you will see
that although I found that the *voltage* across the tank increases as R2
increases, that the *power* in R2 first increases, reaches a maximum, and then
begins to decrease as the value of R2 steadily continues to increase.

Jim

2249. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <7e2adscuucs54bp6547b0fef8sp3evm4ja@4ax.com>
Source record: 62389
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 09:32:59 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:

><slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>, Bilge
><root@radioactivex.lebesque-al.net> inimitably wrote:
>>If it isn't true in a particle picture it isn't
>> true in a wave picture since they are alternative pictures
>> of the same thing.
>
>Please explain 'interference', using particles.

Good point, John. I'll be waiting for the answer. I suspect the answer
will involve a lot of back-pedaling augmented by hand-waving.

Jim

2250. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <6q2adskg2idsc7dssc8cv675sr02qgg15t@4ax.com>
Source record: 62390
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 16:16:25 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:

><notjimbob@earthlink.net> inimitably wrote:
>
>> The equivalent capacitance of three capacitors in series is easy to
>>derive. You can replace three capacitors in series with one equivalent
>>capacitor with *no* change in the generator voltage required.
>
>You could do that, but it would not be correct.

Three capacitors in series *can* be replaced by one equivalent capacitor
just as three resistors in series can be replaced by one resistor. The only
time my statement would not be correct is when there are other components
connected to the three capacitors.

>SH is using Thï¿½venin's
>theorem, and it would appear that you are not familiar with it, hence
>you will never reach a consensus.

It is equally hard to reach a consensus when extra assumptions are
presumed even when simple statements are expressed. I'm sure that given three
capacitors connected in series with no other components that you could calculate
the value of a single capacitor that would be equivalent. That's what I said in
the original statement.

Jim

2251. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <el3adsgs8rbl4o31q68bar8nuiln4t1let@4ax.com>
Source record: 62391
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 16:14:05 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:

><8b1q3mvbi1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
>inimitably wrote:
>> See the series-resonant circuit? If not, then
>> I don't think I can help you.
>
>Quite right, and that equivalence is independent of frequency. So is the
>Norton equivalent, which has a current generator in parallel with a
>parallel-tuned circuit.

If the two circuits are equivalent, then it should be easy to derive the component values for the series-resonant circuit that would make it equivalent to the parallel-resonant original. I'm sure it would only take you a few minutes. Could you post your results here for me to study?

It would be easier for me to see what's going on if the values were expressed so that there were no negative values, -10mH for example, or values that include square roots of -1.

Jim

2252. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <xy9B4.2088$5b5.76278@news2-win.server.ntlworld.com>
Source record: 62392
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

russell shaw <russell@webaxs.net> wrote in message
news:38D45262.AA7C0377@webaxs.net...
>
>
> ^ How about a very large mass (a pyramid ?) with attached
> force transducers to convert low-level/low-freq magnetic
> component of an em-wave into mechanical force? By choosing
> suitable points for the transducers, a dominant mode of
> mechanical resonance can build up, accumulating energy.
> Also, choose a mode of resonance such that the base of the
> structure is preferentially not moving, to minimize energy
> loss into the ground (i don't know if the basic pyramid
> shape satisfies this criterion).
>
Crystals. Don't forget really big hi Q quartz crystals of the sort favoured
by the Atlanteans.

Dirk

2253. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <EH9B4.2111$5b5.76869@news2-win.server.ntlworld.com>
Source record: 62393
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate <jmw@jmwa.demon.co.uk> wrote in message
news:6LdrkQA14J14Ewne@jmwa.demon.co.uk...
>
> Unlike the situation just before the turn of the last century, when many
> eminent scientists thought that all that remained to do was to refine
> the measurements that confirmed established theories (a view that was
> overturned completely by Einstein and others in less than 10 years),
> scientists these days have a much better appreciation of how much we
> still don't know. It can reliably be estimated to exceed by far what we
> already know.

> For example, we know that quantum entanglement exists, but we have very
> little idea of how it works and what the implications are. And we don't
> understand time at all.
> --
However, all we have to do is tie up a couple of loose ends, GR and QM, and
consciousness and computer theory, and we can wrap up science and all go
home.

Dirk

2254. Re: OT-Drake R4B-T4XB question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-19 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38D529EF.128B1021@clifto.com>
Source record: 62394

David Shalita wrote:
> My Drake R4B receiver that has an intermittent Mode Switch.
>
> Cleaning with contact cleaner has never permanenatly cured the need
> to rotate the mode switch many times to make the RX perform.

Find an electronics parts distributor that carries DeoxIT. Pop the $20 or so for the teeny little bottle and use it on the switch wafers. It may not be a permanent cure, but it's certain to do a better job than most contact cleaners.

You can pre-treat with the spray DeoxIT, but you want the expensive teeny bottle of 100% stuff (commonly available spray is 5%, there's a 100% spray but better to use the skinny tube with the teeny bottle).

It looks expensive, but I've treated nearly every bad contact I've had other than cold solder joints with it, and I bought my bottle in 1995, and have about 1/4 bottle left.

```
--
+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

2255. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D55718.F9FABA27@webaxs.net>
Source record: 62210
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

I was wrong about the pyramid bit, power would be lost into the
ground. Only a suspended mass in space (or on suitable supports)
would be low loss.

Dirk Bruere wrote:
>
> russell shaw <russell@webaxs.net> wrote in message
> news:38D45262.AA7C0377@webaxs.net...
> > >
> > >
> > > ^ How about a very large mass (a pyramid ?) with attached
> > > force transducers to convert low-level/low-freq magnetic
> > > component of an em-wave into mechanical force? By choosing
> > > suitable points for the transducers, a dominant mode of
> > > mechanical resonance can build up, accumulating energy.
> > > Also, choose a mode of resonance such that the base of the
> > > structure is preferentially not moving, to minimize energy
> > > loss into the ground (i don't know if the basic pyramid
> > > shape satisfies this criterion).
> > >
> > Crystals. Don't forget really big hi Q quartz crystals of the sort favoured
> > by the Atlanteans.
> >
> > Dirk

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2256. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D557A8.6BB87D84@webaxs.net>
Source record: 62211
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

It gives the equivalent impedance which is what is important for
calculating the input power at or near resonance. It is also a true
series-resonant input impedance behaviour.

James Meyer wrote:
>
> On Sun, 19 Mar 2000 14:44:37 +1000, russell shaw <russell@webaxs.net> wrote:
>
> >You can transform one circuit to another equivalent at a *single*
> >frequency, so that certain impedances are unchanged. For different
> >frequencies, you have to re-evaluate the transformation.
>
> Yes, that's true. But have you seen the "equivalent" circuit that
> science hobbyist came up with? It's nowhere near equivalent at any frequency.
>
> Jim

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2257. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D55946.6F9C0944@webaxs.net>
Source record: 62212
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In first case, source current is

70Vrms/320k= 219uArms

Total load= sqrt(3.2k^2 + 3.2k^2)= 4.53k

Load volts= 219uA x 4.53k= 1 Vrms

Power R1= 1^2/3.2k = 312.5uW

In the second case, the circuit at a certain resonant frequency is
equivalent to a voltage source of 0.693Vrms driving a series 101pF
cap, a series 1.003mH inductor (for fo=500kHz), and a 31ohm load
resistance. Therefore,

P(R2)= 0.693^2/31 = 15.5mW. Therefore, increase of 49.6 times.

James Meyer wrote:
>
> On Sun, 19 Mar 2000 16:14:05 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:
>
> ><8b1q3mvbi1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> >inimitably wrote:
> >> See the series-resonant circuit? If not, then
> >> I don't think I can help you.
> >
> >Quite right, and that equivalence is independent of frequency. So is the
> >Norton equivalent, which has a current generator in parallel with a
> >parallel-tuned circuit.
>
> If the two circuits are equivalent, then it should be easy to derive the
> component values for the series-resonant circuit that would make it equivalent
> to the parallel-resonant original. I'm sure it would only take you a few
> minutes. Could you post your results here for me to study?
>
> It would be easier for me to see what's going on if the values were
> expressed so that there were no negative values, -10mH for example, or values
> that include square roots of -1.
>
> Jim

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *

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* Australia *
****************************************
```

2258. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D55D3E.B670289@webaxs.net>
Source record: 62213
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

As it happens, if you impact a beam of photons (single freq laser) on
a single slit, the interference pattern will be visible on a projection
plate, with bands predicted by the 2D fourier transform of the metal slit
structure.

If you reduce the beam to one photon at a time, and repeat the strikes many
times over, the probability density of strikes on the projection screen still
produces the banded structure!

People have wondered how this can happen when its supposed to be an *interference*
pattern, but what other photons can the single photons interfere with?

This has lead to some people postulating alternate dimensions/universes/timelines
are supplying the extra photons momentarily.

It could also simply mean that one should consider space-time as an analogy to
time-wave/frequency-wave fourier duality. IE: If one tries to pinpoint small
matter to a definite position, the time that it is there becomes uncertain. The
time therefore becomes broad-band as the positional accuracy is made narrow-band,
which is quite obvious when one figures out the fourier space/time duality
implications of our universe.

As for the magnet pulls ball-bearing trick, i know all about quantum level energy
transfer, but when considering macroscopic continuous problems such as LC resonance
and antenna capture area, quantum effects are not neccessary.

James Meyer wrote:
>
> On Sun, 19 Mar 2000 09:32:59 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:
>
> ><slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>, Bilge
> ><root@radioactivex.lebesque-al.net> inimitably wrote:
> >>If it isn't true in a particle picture it isn't
> >> true in a wave picture since they are alternative pictures
> >> of the same thing.
> > >
> > >Please explain 'interference', using particles.
>
> Good point, John. I'll be waiting for the answer. I suspect the answer
> will involve a lot of back-pedaling augmented by hand-waving.
>
> Jim

--
****

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2259. Re: transistor cross reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <jVdB4.49741$e53.2053755@news20.bellglobal.com>
Source record: 62214

BUJIAJ8 wrote in message <20000316204410.11749.00001621@ng-ci1.aol.com>...
Can someone provide me with info on transistor substitution or cross reference?
tnx
bu
Try www.ecgproducts.com and go to semiconductor crossreference.

2260. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dav79.nll.root@radioactivex.lebesque-al.net>
Source record: 62215
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

><8b1ep3nuc1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>

>
>Unlike the situation just before the turn of the last century, when many
>eminent scientists thought that all that remained to do was to refine
>the measurements that confirmed established theories (a view that was
>overturned completely by Einstein and others in less than 10 years),
>scientists these days have a much better appreciation of how much we
>still don't know. It can reliably be estimated to exceed by far what we
>already know.
>

And along with that is the knowledge that if it were simple, it
would have been done. So, it's usually a good idea to exaust the
conventional explanations first. Most experimental anomalies are
anomalies in understanding the data, not anomalies that represent
new phenomena. Only after all other explanations are exausted,
is it time to consider new ones.

2261. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <govadsc3ofk9l4kqjpqrdhh5vjqjrqm62n@4ax.com>
Source record: 62216
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 20:43:15 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:

>In article <d5t8dsgo31elk7lalebbig3dpui557a858@4ax.com>,
>James Meyer <notjimbob@earthlink.net> wrote:
>>
>> Please explain, step by step, how you came to this conclusion.
>
>put L2 and R2 back, and there's your series LC circuit.
>
> ï¿½ ï¿½ _____
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |
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>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |_____
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ | ï¿½ ï¿½ |
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |ï¿½ ï¿½ |
>ï¿½ 1 Vï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ L2ï¿½ ï¿½ R2
>ï¿½ ï¿½ |ï¿½ |ï¿½ ï¿½ |
>ï¿½ ï¿½ |ï¿½ |ï¿½ ï¿½ |
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ _____|_____|
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |
>ï¿½ ï¿½ |ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ ï¿½ |
>ï¿½ ï¿½ |_____|
>ï¿½
>The power supply becomes 1v, the equivalent series
>impedance becomes a single 100pF capacitor. (Or
>fairly close to 100, since I'm assuming that
>C2 >> Ca.)

OK. I see it now. I'm a lot more comfortable with pictures than with
words.

However, the Theveninzed circuit is still not series resonant! Voltage
sources can be replaced by zero Ohm short circuits in order to calculate circuit
characteristics. As far as the inductor and load resistor can tell, there is
still an effective 100 pF cap across them in parallel.

>There is just one resonant FREQUENCY, but the
>circuit behaves as a series resonance. Or you
>could call it a resonant network, and ignore the
>series/parallel considerations entirely, and just
>look at its PSPICE behavior.

The circuit behaves as a parallel resonant circuit since all the elements are effectively in parallel. The circuit would behave as a series circuit if the load resistance happened to be in series with the inductor or the capacitor instead.

In any event, the response of the circuit would be the same no matter what name we use to describe it or which Thevenin incarnation we use. PSpice analysis shows that the voltage across the load resistor can increase without limit as the load resistor's value increases. I originally thought that PSpice analysis also showed that there is a finite, non-zero and non-infinite, value of the load resistor that results in maximum power in the resistor. Subsequent simulations showed that the power *does* increase without limit. A value of 100 Meg Ohms for R2 resulted in a power of over 20 Watts!

Jim

2262. Re: Toroid Core Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d575d4.89135707@news.online.no>
Source record: 62217

On Sun, 19 Mar 2000 15:55:57 -0800, Roy Lewallen <w7el@eznec.com>
wrote:

>Reg Edwards wrote:
>>
>> Measure DC resistance between two needle probes. If less than 1 Megohm
>> or so throw it away.
>> . . .
>
>If it measures less than 1 megohm, it's a high-permeability ferrite,
>excellent for use as a core for a wideband transformer, balun, or EMI
>suppression choke.
>
>Roy Lewallen, W7EL

and if you wish to test how many turns you need for 50 ohm on the
lowest frequency, use a 6BQ5 valve power generator to check heating of
the core and winding, can send the circuit if some interest. Advantage
with this valve type oscillator is that it will survive different
loads without any precautions taken

jan-martin
LA8AK

2263. Re: Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d57725.89472665@news.online.no>
Source record: 62218

On Sat, 18 Mar 2000 21:44:06 -0500, Brad Thompson
<brad.thompson@valley.net> wrote:

>

>
>If you haven't discovered this web site, take a look:
>
>http://www.intio.or.jp/jf10zl/
>
>This Japanese OM offers a wide range of innovative tube and semiconductor
>projects
>and construction tips. The pages are in Japanese and English (not completely
>fluent, but
>his English is infinitely better than most of us can write in Japanese<g>).
>
>73,
>Brad AA1IP
>

it's ufb, never seen a curve tracer before, thought it was rather
complex device, has somebody used it? Could be even simpler using cmos
binary counter

73
jan-martin
LA8AK

2264. Re: Combination AM/FM detector

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d57a5f.90299072@news.online.no>
Source record: 62219

On 18 Mar 2000 05:06:50 GMT, blackm00@cam.org (Michael Black) wrote:

it is difficult to comment on all your notes in one letter, you have
many very good notes, one is:

>Even beyond synchronous and quasi-synchronous detectors, there are
>possibilities for better AM detectors. Bias a diode so it can better
>deal with small voltage levels. Or put the diode in the loop of an
>op-amp, That's not a new idea, but nowadays there are op-amps that
>can better deal with IF frequencies than in the days of the 741.
>
yes, G3SEK has one such application in his book
"The VHF/UHF dx book" see http://www.ifwtech.demon.co.uk/g3sek/
it is a simple circuit to read linearly from 1mV RMS up to 3V,
has the following ranges: 0.1/0.3/1.0/3.0V FSD with +/-2% linearity
across the entire range, "this is good enough to justify the use of
3 1/2 digit LCD panel meter module as an alternative to the analogue
meter shown" (page 12-5 and 12-6)
the circuit consists of a matched pair of schottky diodes and a TL072
or TL082

>So while there may not be a lot of reason for a better AM detector,
>the process of exploring alternatives to the simple diode detectors
>may have value that can't be defined.
>
> Michael VE2BVW

have been told that the typical ex-German Audion type detector used
with zero biassed pentode has similar effect of pulling a weak AM
signal out the back groundnoise. Audion type detectors seems to have
vanished from most applications in the 20's, while it seems to be
reinvented by the Telefunken (Germany) in 1936.... at a time when
everybody else was only thinking of making efficient receivers with
AGC as well as audio derived from a diode detector.

73 Jan-Martin
LA8AK

2265. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <lo0bds0g6kg02mnarqnsn3ca85434oe4lu@4ax.com>
Source record: 62220
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sun, 19 Mar 2000 15:30:13 -0600, Lyle Koehler <lyle@mlecmn.net> wrote:

>James Meyer wrote:
>>
>> Voltage is not power. If you re-read what I wrote above, you will see
>> that although I found that the *voltage* across the tank increases as R2
>> increases, that the *power* in R2 first increases, reaches a maximum, and then
>> begins to decrease as the value of R2 steadily continues to increase.
>>
>
>Power is equal to V^2/R. The voltage multiplication factor is
>proportional to the Q of the circuit, and Q is proportional to R2. When
>R2 is increased by a factor of 10, the power also increases by a factor
>of 10. Using the PSpice simulation in MicroSim DesignLab with a sweep
>range of 1 kHz and 10,000 steps, I get about 300 kV across R2 when its
>value is 1000 megohms and 3 megavolts when R2 is increased to 10,000
>Megohms. The voltage increase is "compressed" by about 1 per cent at the
>higher resistance reading, indicating that the number of steps would
>need to be increased to "catch" the resonance peak.
>
>Lyle, K0LR

A second session with PSpice this afternoon showed me similar results to
the ones you got. I guess I shouldn't be simulating at 3 AM if I'm going to be
posting the results.

Short version... The power in R2 goes up as its resistance goes up. The
100:1 ratio shown on the web site is very conservative.

Jim

2266. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8db8dt.nll.root@radioactivex.lebesque-al.net>
Source record: 62221
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

```
><slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>, Bilge
><root@radioactivex.lebesque-al.net> inimitably wrote:
>>If it isn't true in a particle picture it isn't
>> true in a wave picture since they are alternative pictures
>> of the same thing.
>
>Please explain 'interference', using particles.
>

Before I go to the effort, is this going to be a semantics game
because wavefunction isnt called particle function or some other
such nonsense? If so, the answer is no. If, on the other hand,
this is a legitimate question, fine, but I've wasted enough time
with providing answers to non-questions that really didn't want
an explanation. I'm not going to repeat the 150 line episode I
just was stupid enough to get suckered into by believing an
explanation for this energy sucking nonsense was the goal in
this energy sucking. If you plan to object to a particle being
a probability distribution, a semantics newsgroup will be
a better place to ask.
```

2267. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8db8ji.nll.root@radioactivex.lebesque-al.net>
Source record: 62222
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>On Sun, 19 Mar 2000 09:32:59 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:
>
>><slrn8d8o3h.fi3.root@radioactivex.lebesque-al.net>, Bilge
>><root@radioactivex.lebesque-al.net> inimitably wrote:
>>>If it isn't true in a particle picture it isn't
>>> true in a wave picture since they are alternative pictures
>>> of the same thing.
>>
>>Please explain 'interference', using particles.
>
> Good point, John. I'll be waiting for the answer. I suspect the answer
>will involve a lot of back-pedaling augmented by hand-waving.
>

Why - unless you cant grasp the concept of a particle as a probability
distribution?

2268. Crystal Impedance Meter F.A.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: geotek@wt.net
Message-ID: <38d59f83.360864739@news.wt.net>
Source record: 62223

I generally would not post a message about an item for auction on this forum. But, since questions about crystals come up so often here, I thought that the news about a crystal impedance meter for sale may be helpful. The meter is an RFL 5950A with the 4MHZ to 60MHz plugin. At last check, the price was only $51.
Please see eBay:
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=284181561
The auction ends on 3-21-00 at 19:10 PST.

George Carlson
Geotek Design Services
geotek@wt.net

2269. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dbc3c.nll.root@radioactivex.lebesque-al.net>
Source record: 62224
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>
>People have wondered how this can happen when its supposed to be an *interference*
>pattern, but what other photons can the single photons interfere with?
>
It's not necessary to refer to the resulting pattern as interfereence
in the classical sense. By definition, classical interference involves
waves. If instead, you look at the photons as as accumulating according
to the probablility distribution defined by their wavefunctions, then
you end up without needing photons to interact with each other, since
they don't anyway. In addition, since you cant simultaneously determine
the number of photons and their phases, they only way "interference" can
occur is if the sources are indistinguishable. When the sources are
indistingushable, you aagain can use the simple picture on one photon
at a time, but the wave fumction, and therefore the probability of
where it will land on the screen is modified by the possible paths the
photon may take. The superposition must be coherent superposition, because
the probabilities of traversing each path are not independent of each other.

>
>As for the magnet pulls ball-bearing trick, i know all about quantum level energy
>transfer, but when considering macroscopic continuous problems such as LC resonance
>and antenna capture area, quantum effects are not neccessary.
>

No, and those pictures are usually inconvenient for macroscopic phenomena,
too. However, if some explanation cant be reconciled with those pictures,
usually there is a problem with the explanation. If someone were to claim
they are able to collect more energy than is radiated into the solid angle
they have available to collect the energy with, then it's perfectly reasonable
to cosider a flux of particles and (I'm assuming a 1/r potential, as in E&M)
ask why an isotropic distribution is no longer isotropic. Any claims of
"distorting space" are equivalent to a force on those particles and since
in the case of an antenna, the electrical components dont change the
geometry you see (which, since seeing is also electromagentic in origin,
you would expect to be able to do something similar same thing at optical
frequencies), you'd have to interperet the additional flux as a result
of a force. Furthermore, since I can always define a uniform flux that
crosses the surface of a sphere defined by a radius r in a time t+/-\delta t
as allowed by the uncertainty principle, placing an antenna at some distance
r that collects more energy than it's area allows, requires the either
the additional energy to travel faster than light, since it's path must
be longer or violate causality by requiring the source to alter it's
radiation pattern in anticipation of it being placed in some location.
Neeither of these are as easily visualized using a wave picture, but

because the wave and particle pictures have to have sensible pictures
in terms of each other, it's a good way to rule out the "energy sucking"
crap. If this energy sucking were true, RADAR would be useless, becuase
I could connect a choke and tuning cap to my plane to make it a stealth
bomber by doing the opposite and make myself "electrically smaller" or
take a balloon and throw out a bunch of little resonant circuits that
magically cover the sky by being "electrically bigger" than the
tin foil surroinding them. Anybody willing to throw a tank circuit
out the car window that's "electrically big" to fool the RADAR? I
guessing the answer is no.

2270. 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: wa2ise@netcom.com
Message-ID: <8b4eeh$3r6$1@nntp9.atl.mindspring.net>
Source record: 62225

Modifying toy 49MHz walkie talkies for 6 meters:

For some super cheap local comm work, modify 2 or more of
those cheap AM superregenative 49MHz walkie talkies
Radio shack or KB or other toy stores sell for less than $10
a piece. I found a quantity of surplus crystals at 50.374 MHz
for 79 cents each. These particular ones look like TO3
transistors, but they fit in the talkies. Of course, try out the
talkies before mods are done. Then replace the 49MHz
crystal with the new 6 meter crystal. Then using a real 6
meter rig receiver tuned to the new crystal frequency or a
counter, adjust the variable inductance coil while transmitting
with the talkie. See pictures to see what this coil usually
looks like. You'll probably move the slug to less inductance
(outwards from coil body). I used the above mentioned
crystal as it puts me into the "all mode" subband, where AM
is proper. Be sure to mark the modified talkies as ham rigs,
and only let hams use them.

This could be a simple and fun project for boy scouts getting
their tech ham tickets. Gets them something cheap to practice
modifying, and something they can do some QRP work with.

Pictures are at the bottom of the web page:
http://www.geocities.com/wa2ise/radios/ham.htm

2271. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dbhp4.nll.root@radioactivex.lebesque-al.net>
Source record: 62226
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>Pass. As I say, from a distance it sort of looks OK.

Good choice, since the relative capacitance doesnt determine
the fields uniquely and the drawing lacks enouggh information
to make a definitive statement about them. I predict that
as the plot unfolds, the physics constraining the capacitance,
plate geometry and fields will be a casualty of the legerdemain
and buried in the initial "reasonableness" of how large the
fields are, since it isnt reasonable to say much at all.

2272. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38d5d41e.1326332@news.eunet.yu>
Source record: 62227
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2273. LC filter design on Macs ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Steve <stephen.wilson@cmr.uq.edu.au>
Message-ID: <38D5E73E.F01EDC@cmr.uq.edu.au>
Source record: 62228

Does anyone know of shareware filter design software for the mac ?
Principally, LC LP, HP and bandpass passive networks.

Thanks,

SW

2274. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: bergervo@natlab.research.philips.com
Message-ID: <bergervo.953546462@emu>
Source record: 62229
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

billb@eskimo.com (William Beaty) writes:

> By radiating, the tiny antenna absorbs. Because
>its radiation causes energy to "vanish" from the EM waves as a whole, that
>energy must appear within the antenna.

Scattering theory states that the elastic cross-section is at least
as large as the inelastic cross-section. In other words: the antenna
must scatter (divert into new directions) at least as much energy as
it absorbs from the plane wave.

It is possible to make an electrically small, resonant reflector,
which scatters a lot of energy but does not absorb anything. But
you cannot do the opposite.

Also, the energy balance is determined by the phase of the scattered
waves in the forward direction, because it's only there that destructive
interference can remove energy from the incoming wave.

For more information, search for "Optical theorem" in physics books.

(Jos)

--
Dr. Jozef R. Bergervoet Electromagnetism and EMC
Philips Research Laboratories, Eindhoven, The Netherlands
Building WS01 FAX: +31-40-2742224
E-mail: bergervo@natlab.research.philips.com Phone: +31-40-2742403

2275. Triac replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Ash <ash@vvv.tf>
Message-ID: <38D6043D.9CF82E54@vvv.tf>
Source record: 62230

Hi, looking for a replacement for the Mitsubishi FS2KM-16A triac
which I cant seem to find in all of sweden, surely there got to be
some kind of replacement for this component?

2276. Bravo, and may the energy be with you!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <ZKoB4.11325$mf.904397@bgtnsc05-news.ops.worldnet.att.net>
Source record: 62231
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Well said.
--
Mike Knowlton
Panama City Fl.

2277. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: dangerdav@earthlink.net
Message-ID: <UBbWOMEG+TYj4I2v1eL6iomYHJ7p@4ax.com>
Source record: 62232
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

>I'm still interested in clearly seeing where I ACTUALLY am wrong in this
>"energy-sucking" thing.

If it violates conservation of energy, it's wrong. That's as far as I would worry it through, personally.

Like some other posters mentioned, if you push simplified, algebraic, circuit theroy too far, you need a mathematician familiar with things like infinities multiplied by infinities to explain the inconsistancies - not the usual drill for design EE's.

When possible, I stick to equations that don't produce mathematically bizzare results. If a bizzare result crops up, I try to use a different form of math, and verify the form works by comparing to bench test measurements. A no-brainer approach, I suppose, but if producing useful circuits is really your goal...

Regards,
Dangerdave

2278. VOX Circuit

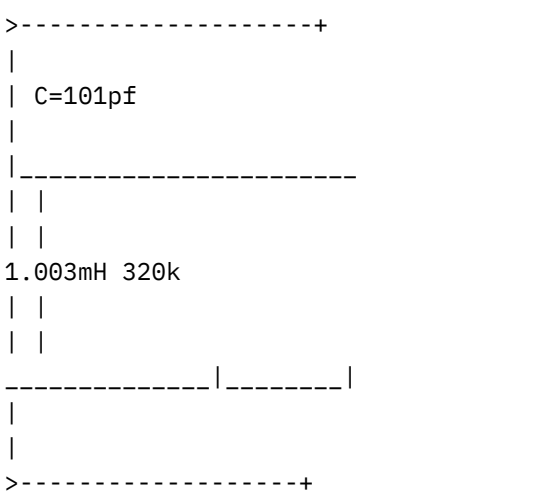
Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Alex Dela Cuesta <Alex.DelaCuesta@siemens.com.ph>
Message-ID: <01bf9268$4fdb7620$5cb58ac2@adelacuesta.siemens.com.ph>
Source record: 62233

CQ Fellow Hams,
I want to use the Internet for DXing, I already have a site to connect. The thing that I need is the VOX circuit for interface to radio and PC. Is there anybody who knows the specs and schematics.
Many thanks
--
73's
Alex DY1ULE
Prosar 145.620 Mhz

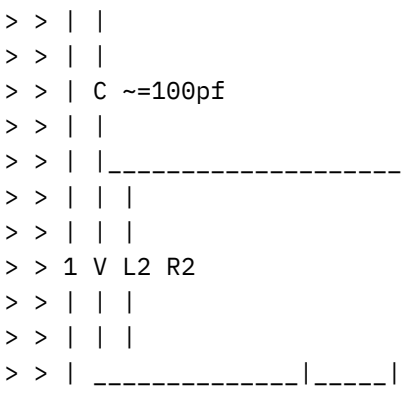
2279. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D62597.7A6522AE@webaxs.net>
Source record: 62234
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

If you use your magic pspice to look at the input impedance of
the following circuit vs frequency, you will find that the input
impedance is minimum and purely resistive at 31.4 ohms at 500kHz,
with a Q=101. What has an impedance minimum at resonance? A series-
tuned circuit...



James Meyer wrote:
>
> On Sun, 19 Mar 2000 20:43:15 GMT, Science Hobbyist <bbeaty@microscan.com> wrote:
>
> >In article <d5t8dsgo31elk7lalebbig3dpui557a858@4ax.com>,
> >James Meyer <notjimbob@earthlink.net> wrote:
> >>
> >> Please explain, step by step, how you came to this conclusion.
> >
> >put L2 and R2 back, and there's your series LC circuit.
> >
> > _____



> > | |
> > | |
> > |_____|
> >
> >The power supply becomes 1v, the equivalent series
> >impedance becomes a single 100pF capacitor. (Or
> >fairly close to 100, since I'm assuming that
> >C2 >> Ca.)
>
> OK. I see it now. I'm a lot more comfortable with pictures than with
> words.
>
> However, the Theveninzed circuit is still not series resonant! Voltage
> sources can be replaced by zero Ohm short circuits in order to calculate circuit
> characteristics. As far as the inductor and load resistor can tell, there is
> still an effective 100 pF cap across them in parallel.
>
> >There is just one resonant FREQUENCY, but the
> >circuit behaves as a series resonance. Or you
> >could call it a resonant network, and ignore the
> >series/parallel considerations entirely, and just
> >look at its PSPICE behavior.
>
> The circuit behaves as a parallel resonant circuit since all the
> elements are effectively in parallel. The circuit would behave as a series
> circuit if the load resistance happened to be in series with the inductor or the
> capacitor instead.
>
> In any event, the response of the circuit would be the same no matter
> what name we use to describe it or which Thevenin incarnation we use. PSpice
> analysis shows that the voltage across the load resistor can increase without
> limit as the load resistor's value increases. I originally thought that PSpice
> analysis also showed that there is a finite, non-zero and non-infinite, value of
> the load resistor that results in maximum power in the resistor. Subsequent
> simulations showed that the power *does* increase without limit. A value of 100
> Meg Ohms for R2 resulted in a power of over 20 Watts!
>
> Jim

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2280. "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000320085457.009daa90@pop.uky.edu>
Source record: 62235

This is bandwidth sucking and I have heard enough it.
Move it some place else. Take it to an antenna forum and
they will bounce it off very quickly. Maybe take it to a CFA reflector.
It just keeps growing and today 20 messages about this
non-sense. Don't argue with this guy he will never get it.

73
Bill wa4lav

2281. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <38D6497F.2B198331@rsccd.org>
Source record: 62236
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

William Beaty wrote:

> Simple capacitive "antennas"
> http://www.amasci.com/tesla/nearfld1.html
[snip]

"" around antennas seems appropriate. I think that it should be better described as a capacitively coupled plate, not an antenna. Or electrostatically coupled plate.

> --
> ((((((((((((((((((((((((O)))))))))))))))))))))))
> William J. Beaty SCIENCE HOBBYIST website
> billb@eskimo.com http://www.amasci.com
> EE/programmer/sci-exhibits science projects, tesla, weird science

2282. Re: Radio plans?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <wxsB4.54693$e53.2117861@news20.bellglobal.com>
Source record: 62237

Calvin Patrick wrote in message <38D5D6BA.4EC18E65@freewwweb.com>...
>I'm looking to get started into Amateur Radio, an was wondering where
>would be a good place to start, and where I could get the plans to build
>my own radio.
>

Get a ARRL Handbook from a ham or a hamfest. Pick a year to suit your
requirements. Pre 1970 gives you lots of tube circuits and post 1980 lots of
solid state circuits and construction info.

2283. Re: Toroid Core Identification?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D65AC2.7BAB3C1F@agilent.com>
Source record: 62238

There's also the possibility that it's a tape-wound core. The logo sounds like Magnetics, Inc., to me, and IIRC, they used to make tape cores. In that event, it could be useful for making an audio-frequency transformer (e.g., a transformer for a relatively low-frequency switching supply). Tape wound cores are commonly encased and look a bit different from ferrite and powdered iron cores.

Cheers,
Tom

Roy Lewallen wrote:
>
> Reg Edwards wrote:
> >
> > Measure DC resistance between two needle probes. If less than 1 Megohm
> > or so throw it away.
> > . . .
>
> If it measures less than 1 megohm, it's a high-permeability ferrite,
> excellent for use as a core for a wideband transformer, balun, or EMI
> suppression choke.
>
> Roy Lewallen, W7EL

2284. Re: 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <38D659C4.C354887@umich.edu>
Source record: 62239

Robert Casey wrote:
>
> Modifying toy 49MHz walkie talkies for 6 meters:
>

You'd best be careful about the signal quality on the 'Talkie
you use. I had an old pair of Knight Kit walkie-talkies that
I built when I was a kid in the early 60's. They were on CB
channel 7, and I had a *blast* with them. Well, I pulled them
out for my kids a few years ago, and found out that they trash
the *entire* set of CB channels when transmitting. The newer
49MHz talkies may not be any cleaner than the ones I had.

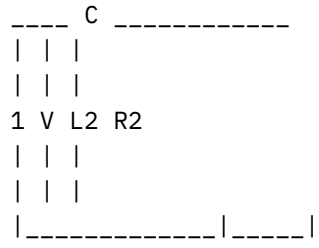
73 de Bob, KI8AB

2285. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38D65C9A.B79D234C@mmm.com>
Source record: 62240
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

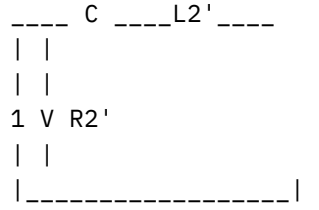
James Meyer wrote:

> > See the series-resonant circuit?
> Well, one of us definitely needs help.



You can take this one step further.
If we restrict ourselves to a single frequency, the
impedance
created by the parallel L2, R2 can also be created by a
series
L2' and R2' (not necessarily the same values as L2, R2).

So the circuit can be redrawn as



Now the series circuit (which is easier for me to
understand) is apparent.

If you change frequencies, you may need different R2',L2'

Opinions expressed herein are my own and may not represent those of my employer.

2286. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <bulcds8jr0tsqbukasi88do3rrqkn51qdq@4ax.com>
Source record: 62241
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

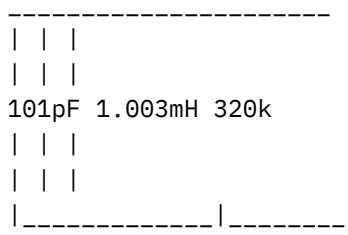
On Mon, 20 Mar 2000 23:20:23 +1000, russell shaw <russell@webaxs.net> wrote:

>If you use your magic pspice to look at the input impedance of
>the following circuit vs frequency, you will find that the input
>impedance is minimum and purely resistive at 31.4 ohms at 500kHz,
>with a Q=101. What has an impedance minimum at resonance? A series-
>tuned circuit...
>
> >--------------------+
> |
> | C=101pf
> |
> |_________________________
> | |
> | |
> 1.003mH 320k
> | |
> | |
> _____________|________|
> |
> |
> >-------------------+
>

The circuit above isn't the same as the one we've been discussing. The
original circuit was fed with a voltage source. A voltage source is a zero
impedance component. For AC impedance analysis, you can replace voltage sources
with short circuits. When you do that, you get this:

>--+------------------+
| |
| | C=101pf
| |
| |_________________________
| | |
| | |
| 1.003mH 320k
_____________	________
>-+-----------------+

That can be re-drawn like this:



Now it looks like a parallel resonant circuit to me.

Jim

2287. Re: how does it work ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38D66D51.AF8FD635@ix.netcom.com>
Source record: 62242
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

aguessy fidegnon wrote:

> can anyone tell me how the is modulated (analog or digital) and
> everything that is happening between the microphone and the antenna .
>
> thanks

=======
It would take a lot of pages to explain carrier modulation, but you can
study the theory at URL:
http://www.ac6v.com/pageA.html#TH
--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

2288. Re: Radio plans?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <38D66E5A.9A8C22AF@ix.netcom.com>
Source record: 62243

Calvin Patrick wrote:

> I'm looking to get started into Amateur Radio, an was wondering where
> would be a good place to start, and where I could get the plans to build
> my own radio.

========
Hi Calvin -- to get started in Amateur Radio -- see URL:
http://www.arrl.org/iands.html#license

To build a radio -- matbe try a kit -- at URL:
http://www.ac6v.com/pageay.html

Good Luck

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

2289. Re: Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8dcrr1.9fb.X@animas.frontier.net>
Source record: 62244

>On Sat, 18 Mar 2000 21:44:06 -0500, Brad Thompson
><brad.thompson@valley.net> wrote:
>>
>>If you haven't discovered this web site, take a look:
>>
>>http://www.intio.or.jp/jf10zl/
>>
>>This Japanese OM offers a wide range of innovative tube and semiconductor
>>projects and construction tips.

This is a GREAT Site!
This feller has TOO MUCH free time!! :-)

>>The pages are in Japanese and English (not completely fluent, but
>>his English is infinitely better than most of us can write in Japanese<g>).

His english is far better than many U.S. teenagers with 'Certificates of
Attendance' at a public high school.

Jonesy W3DHJ

--
SK

--
Marvin L Jones jonz--AT>>frontier.net | W3DHJ
Gunnison, Colorado | Jonesy
7,703' -- 2,345m | DM68mn

2290. Re: Triac replacement?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8b5t30pbo1@nnrp1.deja.com>
Source record: 62245

In article <38D6043D.9CF82E54@vvv.tf>,
Ash <ash@vvv.tf> wrote:
> Hi, looking for a replacement for the Mitsubishi FS2KM-16A triac
> which I cant seem to find in all of sweden, surely there got to be
> some kind of replacement for this component?
>
>

Accordingly Mitsubishi, this is not a TRIAC but a Power MOS-FET.
The nearest sales point for you is Mitsubishi Electric, European Power
Semiconductor Headquarters
Phone:
+33 (1) 55 68 59 00
Fax:
+33 (1) 55 68 59 19
Address:
25-31 Boulevard des Bouvets
92741 Nanterre Cedex, France

Besides, it is manufactured by Powerex too. See http://www.pwrx.com
search engine.
--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2291. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <GAuB4.3499$5b5.115569@news2-win.server.ntlworld.com>
Source record: 62246
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge <root@radioactivex.lebesque-al.net> wrote in message
news:slrn8dbc3c.nll.root@radioactivex.lebesque-al.net...
> >
> >People have wondered how this can happen when its supposed to be an
interference
> >pattern, but what other photons can the single photons interfere with?
> >
> It's not necessary to refer to the resulting pattern as interfereence
> in the classical sense. By definition, classical interference involves
> waves. If instead, you look at the photons as as accumulating according
> to the probablility distribution defined by their wavefunctions, then
> you end up without needing photons to interact with each other, since
> they don't anyway. In addition, since you cant simultaneously determine

Well, according to a poll the physicists favourite explanation of single
photon interference is the Many Worlds hypothesis. 58%

Dirk

2292. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38d685ff.5388583@news.eunet.yu>
Source record: 62247
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2293. Re: Raytheon JAN 6088 circuits wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d67191.4010098@news.online.no>
Source record: 62248

On 20 Mar 2000 18:35:00 GMT, X@Y.Z.net (Kludge) wrote:

>His english is far better than many U.S. teenagers with 'Certificates of
>Attendance' at a public high school.
>
>Jonesy W3DHJ
>__
his German is surprisingly good, too, but perhaps not so important as
the technical content on his site http://www.intio.or.jp/jf10zl/

2294. Re: Back issues of QST, Radio Communication .....

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d69a4a.14436482@news.online.no>
Source record: 62249

if you are interested I have written Radcom (RSGB) index for the
period 1970-1991, seems nobody else has covered this,
so if you want a copy as txt, wp51 or word, pse send me an email

'Backcopies' of technical topics by G3VA are available as books;
Technical topics scrapbook covers 1985-1989, and another book is now
available for later period. Amateur Radio Techniques covers earlier
period, see
https://secure.ws4.u-net.com/www.rsgb.org.uk/books/orderfrm.htm

73
jan-martin
LA8AK - RSGB member since 1974 -

On 17 Mar 2000 05:38:41 GMT, blackm00@cam.org (Michael Black) wrote:

>> >>I am not a member of ARRL, but receive old issues from a club, is it
>> >>some way I could find index for my old QST's in the period 1980-1996

>> >Indexes for 1989 thru 1998 are available online at:
>> >
>> >http://oak.oakland.edu/pub/hamradio/arrl/infoserv/qst/

>
>I'll put this here because it might also be useful. There's a cumulative
>index of Ham Radio magazine at:
> Linkname: ham radio magazine index : 1968 - 1990
> URL: http://webhome.idirect.com/~griffith/hrindex.htm

2295. Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8b66t8dha1@newcastle.cs.ubc.ca>
Source record: 62250

I originally posted this in sci.electronics.components, but it occured to me I might get a better answer here. This is a composite of two postings in that group:

I'm trying to model the low-pass filter at the output of a VHF transmitter. It uses 3 inductors in series and 4 capacitors in shunt. I know the capacitor values, but I only know the physical measurements of the inductors, not their inductance. I need that to model the filter.

The inductors are actually 2.5 turns of 0.050 inch diameter wire (probably 16 AWG magnet wire) close-wound. Two of them have a diameter of approximately 0.280 inch (measured from the centre of the wire) while the other is 0.300 diameter. Their identification in the parts list is LE-300 and LE-185 respectively, which means nothing to me.

The standard (d^2 * n^2)/(18*d + 40*l) formula for single-layer coils predicts inductances of 50 and 55 nH. However, the books also note that the formula isn't very accurate if the coil length is smaller than its diameter.

The ARRL Handbook has a graph of real measured inductance for a particular range of coils, and it demonstrates that actual inductance can be substantially higher than predicted by formula. A 2.5 turn coil had a measured inductance about 10% higher than its calculated inductance, but this is spaced-wound not close-wound and a different diameter than mine, so it's not clear how applicable that factor is in my case.

Is there a more accurate formula for the inductance of coils of only a few turns, whose diameter is greater than their length?

+++++

Some more details of the situation: Someone has donated a number of commercial FM transceivers, originally designed for 150-174 MHz operation, to our amateur club. The firmware in the radio will happily tune to 144-148 MHz, but the power amplifier needs some changes to be efficient at that frequency. A technician somewhere long ago worked out the set of changes that are supposedly needed, but isn't around to ask any questions of. I've been looking at the "official" change instructions, trying to understand them. Some of the changes are just adjusting impedances in base and collector circuits of the power transistors - adding capacitance here, reducing or increasing inductance there. These make sense as simple impedance matching, and show measurable changes in output power vs. frequency that are in the right direction.

But one part of the modification suggests adding capacitance to 2 of the 4 capacitors in the output filter, and spreading the turns of the inductors apart. This doesn't seem to make sense to me - altering only some of the components of a 7-pole filter isn't just going to change its cutoff frequency, it will also change the shape of the passband. And spreading the coils will reduce inductance, *raising* the cutoff frequency - the opposite of what should be desired in this situation.

That's why I want to model the filter - to get some idea of what the response was designed to be, and how these changes will alter it.

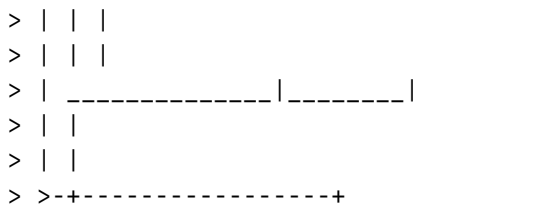
Dave

2296. Re: "energy sucking" simplified

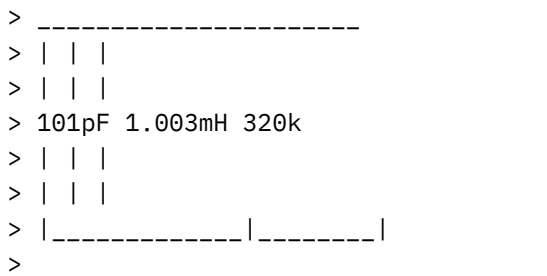
Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <sl6OfZBp8n14EwGF@jmwa.demon.co.uk>
Source record: 62251
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

```
<bulcds8jr0tsqbukasi88do3rrqkn51qdq@4ax.com>, James Meyer
<notjimbob@earthlink.net> inimitably wrote:
>On Mon, 20 Mar 2000 23:20:23 +1000, russell shaw <russell@webaxs.net> wrote:
>
>>If you use your magic pspice to look at the input impedance of
>>the following circuit vs frequency, you will find that the input
>>impedance is minimum and purely resistive at 31.4 ohms at 500kHz,
>>with a Q=101. What has an impedance minimum at resonance? A series-
>>tuned circuit...
>>
>> >--------------------+
>> |
>> | C=101pf
>> |
>> |_______________________
>> | |
>> | |
>> 1.003mH 320k
>> | |
>> | |
>> _______________|________|
>> |
>> |
>> >-------------------+
>>
>
> The circuit above isn't the same as the one we've been discussing.

It is perfectly legitimate to remove the excitation source to determine
the impedance of what is connected to it.
> The
>original circuit was fed with a voltage source. A voltage source is a zero
>impedance component. For AC impedance analysis, you can replace voltage sources
>with short circuits. When you do that, you get this:
>
> >--+------------------+
> | |
> | | C=101pf
> | |
> | |_______________________
> | | |
> | | |
> | 1.003mH 320k
```



That can be re-drawn like this:



Now it looks like a parallel resonant circuit to me.
(Where has the voltage source gone now? No, don't bother....)

It can equally well be regarded as either. The argument is futile. All
you must do is to retain one or other interpretation throughout one
chain of reasoning. You can't change horses in mid-stream.

--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2297. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <dalygiBWDo14EwTS@jmwa.demon.co.uk>
Source record: 62252
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

<8b5n8ovcc1@nntp9.atl.mindspring.net>, Mark Zenier
<mzenier@netcom.com> inimitably wrote:
>C2-L2 will reduce down to a two terminal network that looks like
>an inductor below resonance and a capacitor above resonance.

True.

> If the
>resonant frequency of L2 and the combined capacitance of the two Ca (1
>pf) is higher than the resonant frequency of C2-L2, there's no inductive
>reactance seen in series with Ca.
I think you need to reconsider that conclusion, if you think that it
implies non-resonant behaviour, because it is inconsistent with the
Thï¿½venin analysis. In the case in point, your conditions are satisfied,
since Ca = 1 pF and C2 = 100 pF. But the circuit undoubtedly does
resonate.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2298. Re: FS: Gunnplexers 8 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Allan Henry Kaplan <w1ael@mindspring.com>
Message-ID: <38D6A69F.F56BD7B8@mindspring.com>
Source record: 62253

Ernie;
Will these Gunnplexers tune to the "standard" frequencies of 10.250 and
10.280 with a mechanical screw adjustment? I believe there is a
varactor to cover a +/- 25 MHz range (for FM and locking), right?
Most importantly, have you any left?
TNX, 73, Note the anti-robot filter in my address.
Allan, W1AEL

2299. Overvoltage detection for 12V 5A HT supply: MAX8212 a good choice?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: dmoisan@shore.net
Message-ID: <38d6b1e4.160729921@news.shore.net>
Source record: 62254
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I'm designing a 12V 5A linear PS for an HT and I want to put in an overvoltage crowbar that is somewhat similar to a design in the 1997 ARRL Handbook. I'd prefer to shop as few vendors as possible, and Maxim has been easy to do business with. One chip of theirs, the MAX8212, seems to fit my needs.

Any comments, pro or con? What do the data sheets *not* say that might bite me?

Take care,

Dave

David Moisan, N1KGH, GROL n1kgh@amsat.org
Invisible Disability: http://www1.shore.net/~dmoisan/invisible_disability.html
GE Superradio FAQ: http://www1.shore.net/~dmoisan/faqs/superradio/gesr_faq.html
Sangean ATS-909 FAQ: http://www1.shore.net/~dmoisan/faqs/sangean/ats909faq.html

2300. Current Rating for Diode Strip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <Z8zB4.2494$%S1.58179@nntp0.chicago.il.ameritech.net>
Source record: 62255
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hello All,
I have a couple of HV rectifier sticks and need to know the current rating
of the diodes.

They are RCA model CR110 rated at 10000 PIV.

Anyone know the current rating on these?

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

2301. CW Keyboard Software ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Roland <lroland@teleport.com>
Message-ID: <G5BB4.1067$Zr3.14184@nntp3.onemain.com>
Source record: 62256

I'm looking for a simple keyboard program for sending Morse code. Want to use it with a cw qrp rig, so the interface must key the transmitter directly, ie. Hamcomm won't work. Any leads will be appreciated.
Thanks
John
WB7SWB
lroland@teleport.com

2302. Re: 12V power cord for FT-10R - Why not make your own?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-20 00:00:00 UTC
From: Erik Hoover <NOSPAMhoover@uk2.net>
Message-ID: <38D6EE88.96A70BD8@uk2.net>
Source record: 62257
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.mods

FWIW I fashioned a cig. lighter cable for my ADI HT and it works fine.

Pete or Jill Dubler wrote:
>
> Seems one could just make a simple cable
> to connect the car cigarette lighter
> outlet to the 4mm socket on a Yaesu
> FT-10R HT instead of paying twenty
> something dollars for their adapter. Am
> I missing something? Is there some
> filtering, current limiting (other than
> a fuse), charging logic, or other
> electronics in the Yaesu adapter?
>
> Thanks for any experience here.
>
> 73,
>
> KC0FGU, Pete

2303. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Ken <tylereng@pacbell.net>
Message-ID: <38D7DAE6.C4D28EE6@pacbell.net>
Source record: 62145
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Bill Sloman wrote:

> > They have more energy than an electron. They still have no mass.
>
> So how do they manage to have momentum? Or is a light sail another
> fallacy? And they interact with gravitational fields, which presumeably
> implies that they have a gravitational mass, and can bend space on their
> own account.

Do photons have mass?

Not that anyone can measure. The upper limits to the photon mass range from 10^-40 to 10^-60 grams depending on the method used. All methods compare Maxwell's equations for a massless photon with one including a mass, and then examine many different electrodynamic systems in the universe at larger and larger scales to search for deviations. None have ever been found, and the scale of the system, from Heisenberg's Uncertainty Principle, essentially sets the upper limit to the maximum mass allowable by the test.

As far as solar sailing a better question might be whether photons can exert pressure. There is quite a bit of evidence to support the claim that they indeed can. In fact many argue that the pressure exerted by photons are instrumental in describing some of the physics taking place in newly formed stars which might otherwise collapse back into themselves were it not the for the internal photon pressure acting upon them.

--
Ken Tyler - 1300+ Povray, Graphics, 3D Rendering, and Raytracing Links:
http://home.pacbell.net/tylereng/index.html http://www.povray.org/links/

2304. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D7DBDE.8782E1FF@agilent.com>
Source record: 62146

For what it's worth, using a presumably more accurate formula, I got
0.0497uH and 0.0553uH for the two coil sizes. That's certainly within
engineering tolerance of the values you got. A number of years ago, I
ran a comparison of the classic formula you quoted and some presumably
very accurate tables+formulas in Grover's "Inductance Calculations"
book. The differences were so small at all practical D/L ratios that
I've simply put the much more complex calcs out of my mind; as I recall,
the worst case was about a 5% error for extremely short coils, and about
8% for exceptionally long coils. It seemed to me that any RF coils I
was likely to be involved with would be within 3%. However, that does
NOT include inductance of the leads, but ONLY the coil itself. And it
assumes the coil is in free air; if the coil is shielded, its inductance
will be significantly lower than the formula predicts, and even if it's
just close to a shield on one side, the inductance will be somewhat
reduced.

There's also a freeware (essentially) program on
www.saratogasoftware.com that's useful for calculating inductance of
coils. It deals only in integral numbers of turns (not unreasonable to
me; somehow that half-turn has to be completed...) and gives for the
0.3" coil 35.9nH at 2 turns and 67.5 at 3 turns; 32.3 and 60.4 for the
0.28" coil.

Cheers,
Tom

Dave Martindale wrote:
>
> I originally posted this in sci.electronics.components, but it occured
> to me I might get a better answer here. This is a composite of two
> postings in that group:
>
> I'm trying to model the low-pass filter at the output of a VHF transmitter.
> It uses 3 inductors in series and 4 capacitors in shunt. I know the
> capacitor values, but I only know the physical measurements of the
> inductors, not their inductance. I need that to model the filter.
>
> The inductors are actually 2.5 turns of 0.050 inch diameter wire
> (probably 16 AWG magnet wire) close-wound. Two of them have a diameter
> of approximately 0.280 inch (measured from the centre of the wire)
> while the other is 0.300 diameter. Their identification in the
> parts list is LE-300 and LE-185 respectively, which means nothing to me.
>
> The standard (d^2 * n^2)/(18*d + 40*l) formula for single-layer coils
> predicts inductances of 50 and 55 nH. However, the books also note

> that the formula isn't very accurate if the coil length is smaller than
> its diameter.
>
> The ARRL Handbook has a graph of real measured inductance for a
> particular range of coils, and it demonstrates that actual inductance
> can be substantially higher than predicted by formula. A 2.5 turn coil
> had a measured inductance about 10% higher than its calculated inductance,
> but this is spaced-wound not close-wound and a different diameter than
> mine, so it's not clear how applicable that factor is in my case.
>
> Is there a more accurate formula for the inductance of coils of only a
> few turns, whose diameter is greater than their length?
>
> +++++
>
> Some more details of the situation: Someone has donated a number of
> commercial FM transceivers, originally designed for 150-174 MHz
> operation, to our amateur club. The firmware in the radio will happily
> tune to 144-148 MHz, but the power amplifier needs some changes to be
> efficient at that frequency. A technician somewhere long ago worked
> out the set of changes that are supposedly needed, but isn't around to
> ask any questions of. I've been looking at the "official" change
> instructions, trying to understand them. Some of the changes are just
> adjusting impedances in base and collector circuits of the power
> transistors - adding capacitance here, reducing or increasing
> inductance there. These make sense as simple impedance matching, and
> show measurable changes in output power vs. frequency that are in the
> right direction.
>
> But one part of the modification suggests adding capacitance to 2 of
> the 4 capacitors in the output filter, and spreading the turns of the
> inductors apart. This doesn't seem to make sense to me - altering only
> some of the components of a 7-pole filter isn't just going to change
> its cutoff frequency, it will also change the shape of the passband.
> And spreading the coils will reduce inductance, *raising* the cutoff
> frequency - the opposite of what should be desired in this situation.
>
> That's why I want to model the filter - to get some idea of what the
> response was designed to be, and how these changes will alter it.
>
> Dave

2305. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <s3RB4.13697$84.1410719@alfalfa.thegrid.net>
Source record: 62147

You could measure it. C&S Sales sells good meters for capacitance and inductance. The $99 model1810 works great for me. 73 mark

2306. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <C$VlpeAVD914EwDe@jmwa.demon.co.uk>
Source record: 62148
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8b82d8ebk1@news.fsu.edu>, Jim Carr <jac@dirac.scri.fsu.edu>
inimitably wrote:
> E = sqrt{ (mc^2)^2 + (pc)^2 }
>
> For a photon, with a mass m less than 2 x 10^{-16} eV/c^2, this
> reduces to E = pc for all photons of interest, not E = mc^2.
>
> You get E = mc^2 when p = 0.

You must be right, of course, because you haven't defined 'p'. (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2307. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <KfenRgA7E914EwgL@jmwa.demon.co.uk>
Source record: 62149
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8b86r4drl2@miranda.gmrc.gecm.com>, Richard Herring
<rnh@gmrc.gecm.com> inimitably wrote:
>They have more energy than an electron. They still have no mass.

You could say that, but then you have to explain separately why light is
affected by gravity.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2308. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: meron@cars3.uchicago.edu
Message-ID: <7TRB4.156$K7.2899@uchinews>
Source record: 62150
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <KfenRgA7E914EwgL@jmwa.demon.co.uk>, John Woodgate <jmw@jmwa.demon.co.uk>
writes:
><8b86r4drl2@miranda.gmrc.gecm.com>, Richard Herring
><rnh@gmrc.gecm.com> inimitably wrote:
>>They have more energy than an electron. They still have no mass.
>
>You could say that, but then you have to explain separately why light is
>affected by gravity.
>--
It is explained. Check out general relativity.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

2309. Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: aa1pd@yahoo.com
Message-ID: <8b8r7cvcs1@nnrp1.deja.com>
Source record: 62151

Hi all,

I have just ordered a PK-3 keyer board and parts from morsex which I plan to build and mount in an altoids box. My question is about what would be the best way to keep the small pc board suspended above the bottom of the altoids tin. In a commercial kit they often use little sockets that you screw the board into but what do you savvy homebrewing types like to use as standoffs.

Thanks please post the reply here so that others may benift!

George
AA1PD

Sent via Deja.com http://www.deja.com/
Before you buy.

2310. Re: CW Keyboard Software ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D7FA15.10D80076@mlecmn.net>
Source record: 62152

Roland wrote:
>
> I'm looking for a simple keyboard program for sending Morse code. Want to
> use it with a cw qrp rig, so the interface must key the transmitter
> directly, ie. Hamcomm won't work. Any leads will be appreciated.

There's a simple DOS beacon message generator program on my web page.
Although it was not really designed to be a keyboard program, it will
function as a very basic Morse keyer. Diagrams for PC to rig interfaces
using either the serial or parallel port are included on the web page.
My program will _not_ run under Windows; for that you will need to
search the web for something more modern. For example, check out CwType
at http://www.dxsoft.com/micwtype.htm

--
Lyle, K0LR

http://www.computerpro.com/~lyle

2311. WTB: Schematic for Agrelo DFjr antenna array

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Dan <dand@truvalue.com>
Message-ID: <8b8vqmond1@news.xmission.com>
Source record: 62153
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi All,

I am in desperate need of a schematic and parts list w/ numbers for the
Agrelo DFJr. antenna array. The J. Agrelo story is just too painful so I'll
spare you the details.
Thanks to Steve, WA3SWS for the info he sent me.
This unit had RF applied to the RX port and the little rx amps are blown.
Looking for those parts numbers.

Any and ALL help is greatly appreciated!

73 Dan / N7SLC

"Pray for me, I drive in Utah."

2312. Re: Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Dave Hutchinson <dhutch@cpomail.net>
Message-ID: <38D82079.87C8F327@cpomail.net>
Source record: 62154

The easiest thing I can think of is 4 small nylon screws and 12 nylon nuts. Drill the holes in the corners of the circuit boards (or buy smaller nylon screws), and drill holes in the altoid box. run the nylon screws up through the bottom and fasten with a nylon nut. Put another nylon nut on the screw at the correct height you need for a standoff, put in the circuit board, and lock it down with a nylon nut. you will then have adjustable standoffs that also serves as "feet" for the bottom of the altoid box.

73 de N5XL

aa1pd@yahoo.com wrote:

> Hi all,
>
> I have just ordered a PK-3 keyer board and parts from morsex which I
> plan to build and mount in an altoids box. My question is about what
> would be the best way to keep the small pc board suspended above the
> bottom of the altoids tin. In a commercial kit they often use little
> sockets that you screw the board into but what do you savvy homebrewing
> types like to use as standoffs.
>
> Thanks please post the reply here so that others may benift!
>
> George
> AA1PD
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2313. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d7e56c.99219624@news.online.no>
Source record: 62155

On Tue, 21 Mar 2000 12:49:38 -0800, "ssparky" <ssparky2@thegrid.net>
wrote:

>You could measure it. C&S Sales sells good meters for capacitance and
>inductance. The $99 model1810 works great for me. 73 mark
>
>
you might measure it, and when you apply it in a circuit you may
discover that it is a different value, still you need the formulas to
decide the actual valiues - in practice

2314. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d7e8f5.100123966@news.online.no>
Source record: 62156
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Sat, 04 Mar 2000 02:52:26 GMT, "Al, N2NKB"
<n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:

>
>
>>>
>>single quarterwave with RG213 may attenuate 30dB, twin filter possibly
>>60dB, but need some impedance correction on 144MHz to minimise losses
>>if you choose twin filter
>>
>>73 jan-martin
>>LA8AK
>
>I think that jan-martin is recommending a stub, but I'm not sure. If you take a 1/4
wavelength long
>piece of coax, and keep one end open circuit, the other end will appear to be a short
circuit.
>So you can simply "Tee" the stub into your antenna transmission line. However, the Q might
be low enough to
>degrade the wanted signal that is 26 MHz lower.
>Al
>
>
sorry, I believed you understood English over in America(???) ... in
an international newsgroup... believe a quarterwave RG213 identical to
1/4 wavelength long piece of coax?

Those of you who have some practical experience will be aware that
some mismatch may appear on the frequency you wish to pass.
So dependent on the application, this may be a problem, sometimes not,
but usually one wish to avoid attenuation on 144MHz

2315. Re: Actuator info, pse (Aerial tuner)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38d7f66f.103575307@news.online.no>
Source record: 62157

Thanks, Tom.

I am impressed by the level you keep in helping other persons and
writing long explanations on the diffrerent newsgroups

73 Jan-Martin LA8AK

On Wed, 15 Mar 2000 13:49:18 -0800, Tom Bruhns
<tom_bruhns@agilent.com> wrote:

>Hi Jan-Martin,
>
>That sounds like a common stepper motor. If you do a web search, you'll
>turn up all sorts of info on driving steppers. Not too long ago I
>posted a short "tutorial" about them under some heading about a flatbed
>plotter over in sci.electronics.design. It should be available from
>dejanews, at least. But there's tons of stuff out there. The very
>brief explanation: drive the two windings with a sequence of DC levels,
>like so:
>
>step winding 1 winding 2
>1 +24V 0
>2 +24V +24V
>3 0 +24V
>4 -24V +24V
>5 -24V 0V
>6 -24V -24V
>7 0V -24V
>8 +24V -24V
>(repeat at step 1... Reverse the order of the steps to turn the
>opposite direction.)
>The maximum stepping rate depends on the inertia of the motor and its
>load, and on how quickly you can change current in a winding when you
>turn it on or off. If you use higher voltage, but current limited, you
>can increase speed; and if you accelerate and decelerate in a controlled
>fashion, you can get to higher speeds. The steps listed above would
>normally be called "half-steps" I believe, so once through that cycle
>would probably cause your motor to turn about 30 degrees. 12 cycles
>through it would give you one revolution of your motor shaft.
>
>You can often use a phase-shift capacitor to drive steppers from an AC
>source...
>
>Cheers,

>Tom
>
>
>J M Noeding wrote:
>>
>> got some actuators,
>> 24V, 2 phase, 35 ohms, 7.5°/step
>> hope to use it for remote antenna tuning, but shat sort of pulses is
>> needed to drive it?
>>
>> 73 jan-martin
>> LA8AK

2316. Re: Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Harold Johnson <w4zcb@cytechcis.net>
Message-ID: <WZTB4.74533$Pa1.2061037@news6.giganews.com>
Source record: 62158

Ah! Just put a dab of RTV in the bottom of the tin and press the board down on it. In a couple hours, it's shock mounted and shock proof as well. If you need it back, (if you don't use a BIG dollop), it pries right out.

W4ZCB

2317. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Chuck Parsons <Chuck@CatenaryScientific.com>
Message-ID: <38D847E8.76679951@CatenaryScientific.com>
Source record: 62159
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

James Meyer wrote:

> On Wed, 22 Mar 2000 13:29:36 +1100, Maarten Hoogerland
> <Maarten.Hoogerland@anu.edu.au> wrote:
>
> >Although the photon has no rest mass, it does have momentum p=h/lambda.
> >If it collides with something, it can transfer this momentum.
>
> So after it has bounced off an object and transferred some momentum, its
> wavelength should be longer, right?
>
> If it could transfer momentum without losing any energy, Tesla would
> surely have claimed the patent on the phenomenon. 8-)
>
> Jim

Just as likely that it would of gained energy instead of lost it.

Chuck

2318. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8bau2r$o05$1@nntp9.atl.mindspring.net>
Source record: 62160
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <dalygiBWDo14EwTS@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
><8b5n8ovcc1@nntp9.atl.mindspring.net>, Mark Zenier
><mzenier@netcom.com> inimitably wrote:
>> If the
>>resonant frequency of L2 and the combined capacitance of the two Ca (1
>>pf) is higher than the resonant frequency of C2-L2, there's no inductive
>>reactance seen in series with Ca.
>I think you need to reconsider that conclusion, if you think that it
>implies non-resonant behaviour, because it is inconsistent with the
>Th�venin analysis. In the case in point, your conditions are satisfied,
>since Ca = 1 pF and C2 = 100 pF. But the circuit undoubtedly does
>resonate.

```
Yes, but it's a parallel resonance with L2 & (C2 || Ca).

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident
```

2319. 12V power cord for FT-10R - Why not make your own?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Pete or Jill Dubler <dublerfamily@earthlink.net>
Message-ID: <38D6CD54.3D117A2A@earthlink.net>
Source record: 62258
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.mods

Seems one could just make a simple cable
to connect the car cigarette lighter
outlet to the 4mm socket on a Yaesu
FT-10R HT instead of paying twenty
something dollars for their adapter. Am
I missing something? Is there some
filtering, current limiting (other than
a fuse), charging logic, or other
electronics in the Yaesu adapter?

Thanks for any experience here.

73,

KC0FGU, Pete

2320. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Shaking Hell <asdfg@zxcv.net>
Message-ID: <asdfg-0778AD.02070021032000@news.dircon.co.uk>
Source record: 62259
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

billb@eskimo.com (William Beaty) wrote:

> This effect, by analogy, can be used to explain how a 0.1nM atom can
> interact very strongly with 600nM radiation. It VISUALLY explains how such
> tiny ammonia atoms can generate such long microwaves in ammonia masers.

Arent those long waves just what happens to correspond to the low energy
difference between electron shells?

--
http://members.tripod.com/LanTheBoy
Email: Anti-chaos. ICQ://26027485

doomdoomdoomdoomdoom...................
zink
%%%%%%%The Darkness will love you, the Darkness will take care of you%%%%%%%%
.... People are poison, the hatred can heal you . ...

2321. Re: Current Rating for Diode Strip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38D6CD97.4C8426@cmcorp.com>
Source record: 62260
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Jeff Weinberg W8CQ wrote:

> Hello All,
> I have a couple of HV rectifier sticks and need to know the current rating
> of the diodes.
>
> They are RCA model CR110 rated at 10000 PIV.
>
> Anyone know the current rating on these?
>
> Thanks,
> --
> Jeff Weinberg W8CQ
> w8cqjeff@ameritech.net

I have 2 also, but never found any ratings.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

2322. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Adrian Blake <adrian@snowy.net.au>
Message-ID: <38D6DE31.FD70D4C8@snowy.net.au>
Source record: 62261
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

Ash wrote:
>
> Hi,
> living quarter of a mile away from a powerful pager-system transmitter
> makes
> dx-ing rather difficult, interference spread over a BIG spectrum and I
> need to
> make some filters for 169.5-170MHz to put in front of the pre-amps,
> anyone have any good designs/schematics for easy-to-build filters?

Try a 1/4 wave coax stub, cheap and easy

Adrian VK2ALF
--
Adrian Blake (MIEEE)
Smart Radio Systems Pty Ltd
26b Bombala St, Cooma, NSW 2630, Australia
Ph 61-2-64525555 Fax 61-2-64524317

2323. Re: 12V power cord for FT-10R - Why not make your own?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38d6eedb.13538424@news.mindspring.com>
Source record: 62262
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.mods

Filtering and voltage regulation, as well as a fuse.

Russ

Pete or Jill Dubler <dublerfamily@earthlink.net> wrote:

>Seems one could just make a simple cable
>to connect the car cigarette lighter
>outlet to the 4mm socket on a Yaesu
>FT-10R HT instead of paying twenty
>something dollars for their adapter. Am
>I missing something? Is there some
>filtering, current limiting (other than
>a fuse), charging logic, or other
>electronics in the Yaesu adapter?
>
>Thanks for any experience here.
>
>73,
>
>KC0FGU, Pete

Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2324. Re: 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: wa2ise@netcom.com
Message-ID: <8b6tca$1qk$1@slb0.atl.mindspring.net>
Source record: 62263

>> Modifying toy 49MHz walkie talkies for 6 meters:
>>
>You'd best be careful about the signal quality on the 'Talkie
>you use. I had an old pair of Knight Kit walkie-talkies that
>I built when I was a kid in the early 60's. They were on CB
>channel 7, and I had a *blast* with them. Well, I pulled them
>out for my kids a few years ago, and found out that they trash
>the *entire* set of CB channels when transmitting. The newer
>49MHz talkies may not be any cleaner than the ones I had.
>
I checked them for this, they're not bad. Wouldn't drive a linear
with them though. The modern versions must be a better design than
the old CB ones years ago. Oh, yeah, you can hear one of these talkies
in receive mode; superregenetive sets emit some noise in receive.
I have what the package claims "4 Transistor design", per unit.

2325. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8de33a.s4n.root@radioactivex.lebesque-al.net>
Source record: 62264
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

>billb@eskimo.com (William Beaty) wrote:
>
>> This effect, by analogy, can be used to explain how a 0.1nM atom can
>> interact very strongly with 600nM radiation. It VISUALLY explains how such
>> tiny ammonia atoms can generate such long microwaves in ammonia masers.
>
>Arent those long waves just what happens to correspond to the low energy
>difference between electron shells?

Yes. The only reason for the confusion is a refusal to take quantum
mechanics seriously. In order to get trapped into needing to justify
long wavelengths emitted from point sources, you first have to believe
the photon has a size in some geometric sense which isn't compatible
with being massless, just for starters, rather than calling it's size
the region in space you are most likely to find it. If you take the
probabalistic viewpoint of QM as a description of nature and don't
need to put everything in terms of something you can see, you're better
off. Unfortunately, cconvenient usage of an analogy in a particular
context often ends up being taken as fact.

2326. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D7103E.E861A285@webaxs.net>
Source record: 62265

Do a net search for 'pcairl.exe'. Its a dos program made for small coils
with few turns.

Dave Martindale wrote:
>
> I originally posted this in sci.electronics.components, but it occured
> to me I might get a better answer here. This is a composite of two
> postings in that group:
>
> I'm trying to model the low-pass filter at the output of a VHF transmitter.
> It uses 3 inductors in series and 4 capacitors in shunt. I know the
> capacitor values, but I only know the physical measurements of the
> inductors, not their inductance. I need that to model the filter.
>
> The inductors are actually 2.5 turns of 0.050 inch diameter wire
> (probably 16 AWG magnet wire) close-wound. Two of them have a diameter
> of approximately 0.280 inch (measured from the centre of the wire)
> while the other is 0.300 diameter. Their identification in the
> parts list is LE-300 and LE-185 respectively, which means nothing to me.
>
> The standard (d^2 * n^2)/(18*d + 40*l) formula for single-layer coils
> predicts inductances of 50 and 55 nH. However, the books also note
> that the formula isn't very accurate if the coil length is smaller than
> its diameter.
>
> The ARRL Handbook has a graph of real measured inductance for a
> particular range of coils, and it demonstrates that actual inductance
> can be substantially higher than predicted by formula. A 2.5 turn coil
> had a measured inductance about 10% higher than its calculated inductance,
> but this is spaced-wound not close-wound and a different diameter than
> mine, so it's not clear how applicable that factor is in my case.
>
> Is there a more accurate formula for the inductance of coils of only a
> few turns, whose diameter is greater than their length?
>
> +++++
>
> Some more details of the situation: Someone has donated a number of
> commercial FM transceivers, originally designed for 150-174 MHz
> operation, to our amateur club. The firmware in the radio will happily
> tune to 144-148 MHz, but the power amplifier needs some changes to be
> efficient at that frequency. A technician somewhere long ago worked
> out the set of changes that are supposedly needed, but isn't around to
> ask any questions of. I've been looking at the "official" change

> instructions, trying to understand them. Some of the changes are just
> adjusting impedances in base and collector circuits of the power
> transistors - adding capacitance here, reducing or increasing
> inductance there. These make sense as simple impedance matching, and
> show measurable changes in output power vs. frequency that are in the
> right direction.
>
> But one part of the modification suggests adding capacitance to 2 of
> the 4 capacitors in the output filter, and spreading the turns of the
> inductors apart. This doesn't seem to make sense to me - altering only
> some of the components of a 7-pole filter isn't just going to change
> its cutoff frequency, it will also change the shape of the passband.
> And spreading the coils will reduce inductance, *raising* the cutoff
> frequency - the opposite of what should be desired in this situation.
>
> That's why I want to model the filter - to get some idea of what the
> response was designed to be, and how these changes will alter it.
>
> Dave

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2327. Re: how does it work ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: maddog@io.com
Message-ID: <38d70b9c.103889084@news.io.com>
Source record: 62266
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew

On Tue, 14 Mar 2000 13:43:26 +0100, aguessy fidegnon
<aguessyf@rc.bel.alcatel.be> wrote:

>can anyone tell me how the is modulated (analog or digital) and
>everything that is happening between the microphone and the antenna .

Aw, Come on guys, this can't be that hard! Let's think outside the
box we imprisoned ourselves in.

In any radio transmitter, you must first generate a radio-frequency
(RF) electrical signal, with sufficient power to generate radio waves
when it is applied to the antenna. An "oscillator" is the device that
generates the electrical signal, and "amplifiers" boost it to a level
that the antenna can broadcast. This signal provides the energy that
will carry the information or "modulation" (i.e., your voice) and can
be distinctly tuned by the receiver on the other end of the
communication. How the antenna converts RF electrical signals to
become RF radio waves is pure magic (and I'd like to hear an
explanation of that myself).

Modulation is the means of modifying the RF electrical signal by tiny
amounts that relate in some way to the input signal. In your example,
the input signal is sound , which the microphone converts from
pressure waves to electrical "audio" signals. These tiny electrical
signals are amplified and then allowed to modify the original RF
electrical signal. Regardless of how this is done (analog AM, analog
FM, or digital) the modulator varies the waveform in such a way that
the receiver on the other side of the planet can "de-modulate" it and
recover the original information (i.e., your voice).

There, that wasn't so hard, was it?

regards,
monty N5FC

2328. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: russell shaw <russell@webaxs.net>
Message-ID: <38D711EA.900A64F7@webaxs.net>
Source record: 62267
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

I really thought someone would have said by now that whether an impedance
measurement port looks like a series resonance or parrallel resonance, is
determined where abouts in the circuit the measurement is done. After all,
the circuit is an impedance inverter, so (series resonance)<->(parrallel resonance).

James Meyer wrote:
>
> On Mon, 20 Mar 2000 23:20:23 +1000, russell shaw <russell@webaxs.net> wrote:
>
> >If you use your magic pspice to look at the input impedance of
> >the following circuit vs frequency, you will find that the input
> >impedance is minimum and purely resistive at 31.4 ohms at 500kHz,
> >with a Q=101. What has an impedance minimum at resonance? A series-
> >tuned circuit...
> >
> > >--------------------+
> > |
> > | C=101pf
> > |
> > |_______________________
> > | |
> > | |
> > 1.003mH 320k
> > | |
> > | |
> > _______________|________|
> > |
> > |
> > >-------------------+
> >
>
> The circuit above isn't the same as the one we've been discussing. The
> original circuit was fed with a voltage source. A voltage source is a zero
> impedance component. For AC impedance analysis, you can replace voltage sources
> with short circuits. When you do that, you get this:
>
> >--+-----------------+
> | |
> | | C=101pf
> | |
> | |_______________________
> | | |
> | | |

> | 1.003mH 320k
> | | |
> | | |
> | _____|_____|
> | |
> | |
> >-+-----------------+
>
> That can be re-drawn like this:
>
> _____
> | | |
> | | |
> 101pF 1.003mH 320k
> | | |
> | | |
> |_____|_____|
>
> Now it looks like a parallel resonant circuit to me.
>
> Jim

--

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *

2329. Variable Power Supply project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Ed Ngai <engai.99@sprintmail.com>
Message-ID: <38D714FE.91E08110@sprintmail.com>
Source record: 62268

Hi all, I'd like to build a home brew power supply w/
2 to 30 V out , 3 Amp , run on 120VAC.

A friend said that QST has had articles before on this
type on project kit, but I don't have a sub. to QST mag.

If someone has a higher volt and amp output, that would
be great too.

thanks for any help
Ed , engai@sprintmail.com
KF6DZL

2330. Re: 12V power cord for FT-10R - Why not make your own?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Ed Ngai <engai.99@sprintmail.com>
Message-ID: <38D7166B.1C395799@sprintmail.com>
Source record: 62269
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.mods

Hi,
for Filtering ... I've always made a 4 diode bridge rectifier
from 1N4001,2,3 and some caps. Even if 1 had a wall transformer
that's suppose to be regulated, I've found that if I can't hurt,
and some caps. 0.1uF and 0.01uF .

voltage regulation ... 7805 = 5volts ? or what ever the device
needs as for volts in.

KF6DZL, Ed

"Russell C. Nixon" wrote:
> Filtering and voltage regulation, as well as a fuse.

> Russ

> Pete or Jill Dubler <dublerfamily@earthlink.net> wrote:
> >Seems one could just make a simple cable
> >to connect the car cigarette lighter
> >outlet to the 4mm socket on a Yaesu
> >FT-10R HT instead of paying twenty
> >something dollars for their adapter. Am
> >I missing something? Is there some
> >filtering, current limiting (other than
> >a fuse), charging logic, or other
> >electronics in the Yaesu adapter?
> >
> >Thanks for any experience here.
> >73,
> >KC0FGU, Pete

2331. Re: 12V power cord for FT-10R - Why not make your own?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Peter Maus <PeterMaus@worldnet.att.net>
Message-ID: <38D71987.94E7B451@worldnet.att.net>
Source record: 62270
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.homebrew,alt.ham-radio.vhf-uhf,alt.ham-radio.mods

> for Filtering ... I've always made a 4 diode bridge rectifier
> from 1N4001,2,3 and some caps. Even if 1 had a wall transformer
> that's suppose to be regulated, I've found that if I can't hurt,
> and some caps. 0.1uF and 0.01uF .

I had a chief engineer at KOEL who was of the opinion that there was no problem that couldn't be mitigated by adding more capacitance. By the time I had left the radio station, Arnie had wired in so much capacitance into virtually EVERYthing, that it would take a half hour from the time I pulled the switch, just for things to finally shut off.

The downside of that was that I could make a fresh pot of coffee between the time I pulled the switch in the morning, and the moment when the board finally came on.

But not even the Simon and Garfunkel records hummed.

2332. Hickok tube tester Compactron Adaptor wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000321013953.17307.00006243@ng-xe1.aol.com>
Source record: 62271

Hello group, has anyone the compactron adaptor, Hickok part # 1704
that they can part with reasonably ?

This allows you to plug into the TV-7 tester tubes like 6LF6, 6JE6C, etc.

I will pay 20 dollars delivered to New Jersey for a good,
completely working one.
I had found one last month but it arrived broken and worthless.

Please respond privately if available.

Regards,
Joe Pratt, Tubecntral@aol.com

2333. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8defgv.s4n.root@radioactivex.lebesque-al.net>
Source record: 62272
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

> The circuit above isn't the same as the one we've been discussing. The
>original circuit was fed with a voltage source. A voltage source is a zero
>impedance component. For AC impedance analysis, you can replace voltage sources
>with short circuits. When you do that, you get this:
>
Since I dont have pspice, I have to use the old-fashioned method known
as laziness, meaning jackson is overkill and the default is halliday &
resnick level, since it fits the situation and nothing more complex
should be required.

As long as the geometry remains fixed, it really doesn't matter -
it's a black box. In any case, the fields arent defined by the black
box. The only case in that you can simplify this is to use ideal
capacitors with no resistors or inductors and then, the field is the
same everywhere. As I said earlier, one may choose components to get
most anything, but it didn't seem to register. More is needed to
specify the fields. I can get a 100 pf cap by choosing A/d in an
infinite numer of ways. The capacitance determines the charge at a
given potential, not the fields. The geometry alone determines the
capacitance, but the capacitance doesnt specify the geometry. The
fields require that the voltage and geometry of the charge desnisty
be specified completely (unless you want to specify the normal
derivative everywhere instead of V or unless you are really into
pain and specify part of it one way and part another).

For the ideal case, only the pieces immediately above an below the
inner capacitor contribute to the the series piece that is denoted
-||--||--||-- and the rest of the area is an effective parallel
capacitance. It will be obvious the outer capacitor is totally
without puropose. Take the capacitors such that their midlines may
have some offset denoted by off (i.e., it isn't symmettic vertically).
Then:

```
--------------+
|
-----------------------
===

-----------------------
|
--------------+
```

separation of outer = do, area = Ao,
separation of inner = di, area = Ai
separation center-to-center = off

It's equal to:

A1 A2 A3 A1+A2+A3 = Ao, A2=Ai
-------+-----------+----------------+
| | |
------- --- ---------------
===
+ +
------- --- ---------------
| | |
------ +-----------+----------------+

Since A1 and A3 are just the total area - A2, I can wirite it more usefully as (w/o \epsilon_{0}, too)

(A-A2)/do + A2/do

The value of the capacitors in series then must be just A2/do, the total separation of the large plates (which shouldn't be too surprising since the inner plates are not doing anything yet):

(omitting \epsilon)

1/C = [(do - di)/2 - off]/A2 < outer-inner (top)
+ di/A2 < inner-inner (inner cap)
+ [(do - di)/2 + off]/A2 < inner-outer (bottom)
= (1/A2) [(do-di) + di]
= do/A2

and you get C = A2/do for the effective capacitance regardless of how you choose the geometry For a voltage maintained on the outer plates, you have a total charge density:

\sigma = Q/A2 = CV/A2 = \epsilon * V/do

If you add a resistor to the center, then at time t=0, the fields are still the same, everywhere, but the charge is bled off across the resistor until the plates are equipotentials. So the field between them is 0 and the field outside is larger. Suppose you reverse the field on the outer plates after 1/4 of the charge bleeds off? Then the outer plates are driven to -V and V, but there is still charge on the inner plates and the capacitance hasn't changed,

Q ------------- -------------
+ - from V

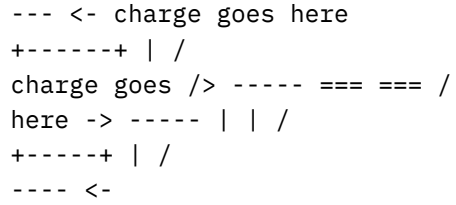
_ (induced) -> + (induced) _ (remaining)
.75 Q --- ---
+ "" - "" ""

The +Q induced - _ Q left over, leaves only -.25 Q

It's possible to arrange R, C, A, d so that the relative field strengths can be either larger between the inner plates or between the outer and inner plates, or in the case of vertical asymmety, the inner plates

can have a field value that lies between the other two values.

The outer capacitor, as I've mentioned repeatedly serves absolutely no purpose. All it does is a job that two wires would do better and with a simpler analysis. I still have no intention of getting suckered into agreeing to the results of an incompletely specified problem. So far, almost nothing is specified that is of any use to the question posed.

>
> Now it looks like a parallel resonant circuit to me.
>


What's the difference? Nada. Charge is supplied to the same plates and induces the charge on the same two plates in the other cap. Call it anything you like - they dont do anything but act as wires here, since anything you can do with them, you can do without them.

2334. DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <0Q1YimAX7y14Ew2r@jmwa.demon.co.uk>
Source record: 62273
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<asdfg-0778AD.02070021032000@news.dircon.co.uk>, Shaking Hell
<asdfg@zxcv.net> inimitably wrote:
>billb@eskimo.com (William Beaty) wrote:
>
>> This effect, by analogy, can be used to explain how a 0.1nM atom can
>> interact very strongly with 600nM radiation. It VISUALLY explains how such
>> tiny ammonia atoms can generate such long microwaves in ammonia masers.
>
>Arent those long waves just what happens to correspond to the low energy
>difference between electron shells?

Yes, that's how they are generated. WB is referring to the fact that
efficient radiation normally requires the radiating body to be at least
as large as the wavelength of the emission. But I'm not sure that it
applies when the body is of atomic dimensions, or in fact, not even as
big as the atom as a whole, since the emission comes from the electron
that changes orbit. Of course, electrons have no definite size - their
mass is so low that they are more like fuzzy blobs than tiny balls.
Photons, having no mass, are really quite big (;-).
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2335. Re: VOX Circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38d78f84.236717687@news.erols.com>
Source record: 62274

Alex: I used a little 6 dollar kit from Ramsey Electronics. I think there is some information on what we did and how we did it on my web site:

http://www.erols.com/wmeara

There were also some QST articles on ways you could modify a Radio Shack Vox circuit.

We had a lot of fun interfacing Internet Phone with my VHF ham gear (at the time I was in a location where this was legal). I used to get calls from around the world on my 2 meter HT!

This was in 1995. At the time there was a lot of ham activity on Internet Phone, but when I checked in a while back, I couldn't find any hams. Where are the hams who are using I-phone like systems hanging out? Pow-wow? Other software?

73 Bill N2CQR

On 20 Mar 2000 12:33:15 GMT, "Alex Dela Cuesta" <Alex.DelaCuesta@siemens.com.ph> wrote:

>CQ Fellow Hams,
>I want to use the Internet for DXing, I already have a site to connect. The
>thing that I need is the VOX circuit for interface to radio and PC. Is
>there anybody who knows the specs and schematics.
>Many thanks
>--
>73's
>Alex DY1ULE
>Prosar 145.620 Mhz

2336. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dem0r.srg.root@radioactivex.lebesque-al.net>
Source record: 62275
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

>Photons, having no mass, are really quite big (;-).

And does the photon's size "move" along with it, i.e., is the
"size" geometrically related to to this photon? Can I hold up
a measuring stick (in as generic a sense as required that allows
pinning down the shape) as it goes by (by however impractical
an experiment)?

2337. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Bill Sloman <bill_sloman@my-deja.com>
Message-ID: <8b7sei$6qa$1@nnrp1.deja.com>
Source record: 62276
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <0Q1YimAX7y14Ew2r@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> <asdfg-0778AD.02070021032000@news.dircon.co.uk>, Shaking Hell
> <asdfg@zxcv.net> inimitably wrote:
> >billb@eskimo.com (William Beaty) wrote:
> >
> >> This effect, by analogy, can be used to explain how a 0.1nM atom
> >> can interact very strongly with 600nM radiation. It VISUALLY
> >> explains how such tiny ammonia atoms can generate such long
> >> microwaves in ammonia masers.
> >
> >Arent those long waves just what happens to correspond to the low
> >energy difference between electron shells?
>
> Yes, that's how they are generated. WB is referring to the fact that
> efficient radiation normally requires the radiating body to be at
> least as large as the wavelength of the emission. But I'm not sure
> that it applies when the body is of atomic dimensions, or in fact, not
> even as big as the atom as a whole, since the emission comes from the
> electron that changes orbit. Of course, electrons have no definite
> size - their mass is so low that they are more like fuzzy blobs than
> tiny balls. Photons, having no mass, are really quite big (;-).

Photons have no rest mass, but e=mc^2 means that they all have some
mass, and some of the shorter X-rays and gamma rays outweigh an
electron. Such photons are - of course - very small.

--
Bill Sloman, Nijmegen

Sent via Deja.com http://www.deja.com/
Before you buy.

2338. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: jac@dirac.scri.fsu.edu
Message-ID: <8b82d8ebk1@news.fsu.edu>
Source record: 62277
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <8b7sei$6qa$1@nnrp1.deja.com>
Bill Sloman <bill_sloman@my-deja.com> writes:
>
>Photons have no rest mass, but e=mc^2 means that they all have some
>mass, ...

Please read the Relativity FAQ.

The correct expression (viz the PDG review on relativistic kinematics)
is that
E = sqrt{ (mc^2)^2 + (pc)^2 }

For a photon, with a mass m less than 2 x 10^{-16} eV/c^2, this
reduces to E = pc for all photons of interest, not E = mc^2.

You get E = mc^2 when p = 0.

--
James A. Carr <jac@scri.fsu.edu> | Commercial e-mail is _NOT_
http://www.scri.fsu.edu/~jac/ | desired to this or any address
Supercomputer Computations Res. Inst. | that resolves to my account
Florida State, Tallahassee FL 32306 | for any reason at any time.

2339. Clearspeech Speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: bobb <bobb@ulster.net>
Message-ID: <38D78D77.7DD23A69@ulster.net>
Source record: 62278

Has anyone thied the "Clearspeech Speaker" by Am-Com of Lakeside, Montana? The QST Ad states that the speaker will filter 95% of of the background noise. I was just woundering if it is worth the $130 price.

Bob Bartel W2AWS

2340. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: rnh@gmrc.gecm.com
Message-ID: <8b86r4drl2@miranda.gmrc.gecm.com>
Source record: 62279
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <8b7sei$6qa$1@nnrp1.deja.com>, Bill Sloman (bill_sloman@my-deja.com) wrote:

> Photons have no rest mass,

So far, so good.

> but e=mc^2 means that they all have some mass,

No. The 'm' in E=mc^2 is the (rest) mass. That formula only applies
in the rest frame, as it's a special case of the more general formula
E^2 = p^2c^2 + m^2c^4 .

> and some of the shorter X-rays and gamma rays outweigh an
> electron.

They have more energy than an electron. They still have no mass.

> Such photons are - of course - very small.

I don't think that's a meaningful statement.

--
Richard Herring | <richard.herring@gecm.com>

2341. Re: Variable Power Supply project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <ICNB4.73496$Pa1.2029131@news6.giganews.com>
Source record: 62280

Ed, a simple way to make a power supply is to use a 723 integrated circuit. This is used by Astron and many other power supply companies. For application notes on this device, try web pages of National Semiconductor, Texas Instruments, Motorola, and the like. They publish schematic diagrams that you can use as is, in conjunction with a simple full wave rectifier and filter. You might have to send email to these companies and ask for data sheets and application notes, if the info isn't on the web page.

You can design it for a wide range of output ratings, depending on the transistors and transformer you use.

73, Bob K6DDX

2342. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8b8a50khn1@newcastle.cs.ubc.ca>
Source record: 62281

russell shaw <russell@webaxs.net> writes:
>Do a net search for 'pcairl.exe'. Its a dos program made for small coils
>with few turns.

Are you sure that's the right spelling? Several different search
engines (altavista, yahoo) weren't able to find a single reference.

Dave

2343. Re: Deep Cycle Battery

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: David Struebel <wb2ftx@nac.net>
Message-ID: <38D7ADB7.79E576FC@nac.net>
Source record: 62282
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I've done a lot of research on these lately- Have over 400 amp-hrs of capacity.

Check these sites

http:/theepicenter.com

http://www.12voltdcpower.com

http://www.windsun.com

http://www.4Unique.com

http://nyquist.ee.ualberta.ca/~schmaus/dcbat.html

Also Sears has information on their batteries at http://www.sears.com

Some do not consider the Sears marine/deep cycle batteriesto be true deep cycle

Good luck 73

Dave WB2FTX
wb2ftx@nac.net

dm wrote:

> I am looking for solid information on the use of Deep Cycle Storage
> Batteries in (1) Cool Weather, above freezing, and (2) Cold Weather,
> from Zero Celcius down to Minus Ten Celcius.....
>
> E-Mail or 'Group replies appreciated N 7 D M

2344. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8b8ame$1ve$1@plutonium.btinternet.com>
Source record: 62283

Download in a few seconds program SOLENOID from website below. Not zipped up. Amonst other things it computes coil inductance for given length, diameter and number of turns.
--
==========
Regards from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========

2345. L.O.S.A - List of Stamp Applications [000320]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: cjX@hth.com
Message-ID: <38d7af15.67525782@news.sverige.net>
Source record: 62284
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

Hi,

Below is the latest index of L.O.S.A and you can download the
complete L.O.S.A from the following places...

WWW:

http://www.hth.com/losa/

FTP:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

1.0 What is L.O.S.A all about?

This list was started back in -95 when I heard about (more or less)
uniqe problems that was solved by using a BASIC Stamp. Especially Guy
Gustavson's story (see #001) about how he saved his beloved cat Kesha
gave me the inspiration to start writing L.O.S.A. I hope Kesha still
is alive and having a great life. Now 5 years later there are 180+
applications described and I hope you will enjoy reading all (or
parts) of them.

The main purpose of this list is to get an idea of what other people
are using their BASIC Stamps for and maybe get some inspiration or
hints for your own projects. Some of the projects described in the
list also have links to source code and schematics for download.

1.1 How can I contribute to this list ?

If you have done something (big or small) with the BASIC Stamp that
you are willing to tell others please use the form given below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Visit the following Web site and fill in the contribution form...

http://www.hth.com/losa/

1.2 Why are some links dud's ?

Since people changes their e-mail and web addresses some links may be
dud's. If you previously contributed with one (or more) of the
applications please take a quick look and check your e-mail address

and/or web-links. I'm only able to keep the list updated if I'm
informed about changes, thanks in advance.

1.3 List of contributions

> = Indicates a new or updated application since last time.

001 Robo-Cat
002 Logic Rudder
003 Interfacing MAX186 8 channel 12bit A/D
004 Scrolling LED Sign
005 Tone Decoder
006 Pager
007 HexWalker Mobile Robot
008 Robo Bug
009 EXPBOT Robot controlled by Stamp
010 Andrews Ever Evolving Lego Robot
011 Factory Monitoring System
012 Wave to the Cats/Desk Temperature
013 Gamer's Die Roller
014 Stamp II Serial I/O
015 Voice and CW Fox Hunt Transmitter IDer
016 Lift (elevator) Controller
017 Paging with the Stamp
018 Switching Sytem
019 Door Entry Card Reader
020 Telephone Card Reader
021 DTMF Decoder
022 Ion chamber radiation monitor
023 Barn Monitor
024 Dallas one-wire interface
025 Sculpture control
026 Commercial clothes dryer controler
027 Morse Code Keyer
028 Traffic Light Controller
029 Automotive Lamp Control
030 Single Switch Scanning Device for Disabled
031 Bell timer for school bell control
032 RIMS controller for beer making
033 Stamp 1 and ISD 25XX Sound Chip Application
034 Camera Wireless Controller
035 Simple Battery Check using the BS2-IC
036 Photocell MIDI Controller
037 DCF-Clock
038 Radio-controlled Digital Clock
039 Weather Station I
040 Private Aid To Navigation
041 Stamp II in Space
042 MAT32 long integer math routines
043 Distinctive Ring Detector

044 Extended Stamp Memory
045 Debate Stoplite
046 Digital nametag
047 ST506 Disk Seeking Demo Controller
048 Robot: Multi-Stamps Communicate via Shared Memory
049 NiMH Battery Charger/Conditioner
050 555 Timer as A/D Converter
051 Bits of Light
052 Process Control
053 Near Space Capsule
054 PIC Debugger
055 DS1820 Temp Sensor
056 Air muscle hexapod robot
057 Lights
058 Caller-ID Interface
059 Wind speed and wind direction measurement device
060 Calibrated Dust Feeder for Air Cleaner Tests
061 Use of a Serial EEPROM as a Lookup Table
062 Displaying Quantities on a 200 mV Panel Meter
063 Programmable Proportional Air Valve
064 Basic Stamp machine control application
065 Compass Interface for Navigation
066 Truck + ? identification
067 Meteoreological Station
068 Stamp Controls Electronic Tester for flex circuits
069 Game Timer
070 Photoghrapic light meter
071 Data System Remote Control on unmanned aircraft
072 Speaking Instructor
073 Small Mobile Robot
074 R/C helicopter altitude control unit
075 Automobile Rally Odometer Interface to Laptop
076 LCD drivers
077 Stamp I / PC Interface Demo
078 Stamp Photo Meter
079 Stiquito(TM) 97 HexaPod Robot
080 XRaCS DTMF Radio X10 Control with Voice Response
081 Interfacing the Basic Stamp 2 with I2C Devices
082 The WeatherStamp Meteorological Station
083 Maxxum 7000 Remote Release Widget
084 Xs And Os games for college project
085 Stamp II Mouse Emulator (Version 6)
086 Basic Alarm System
087 Interfacing with a Printer
088 Dinosaur Quiz Game
089 Chemical Injection System
090 RS-232 connections between Stamp and host
091 Video Character Overlay Generator Controller
092 Suction tube depth measurement display
093 Electronic Compass with Basic Stamp 2

094 Event Logger with 8K 24C65 I2C memory
095 Fixing the depth of a suction-pipe with the BS 2
096 Superchaser
097 Corky'z Robotz
098 Cloudrider: analog network with BS2 and BS1's
099 Yet Another Real Time Clock, Dallas DS1287
100 Amateur RadioSatellite Tracking (Az/El) Controller
101 DTMF Decoder
102 PC to STAMP via RS232 routines
103 PC Frequency Counter
104 Sub-Millisecond Reaction Timer
105 Computerized Dynamics Cart
106 Ham Radio Interface Using the Basic Stamp 2
107 Remote tempsensors communicates over the power lines
108 Interfacing a BASIC Stamp to SRAM
109 Stepper controller pulse generator
110 Automatic rang caller
111 Automatic emergency broadcast system
112 BASIC Stamp I as an welding machine
113 PLM-24 to X-10 Gateway
114 Semi-Automated Combusitible Gas Indicator Tester
115 Counter-rotating Servos
116 Joystick Controlled Robotic Arm
117 Anti Traction Control Device
118 Cat Chasing Lego Robot and Other Circuits
119 Camlift
120 Control 15 Servos in Parallel
121 8 Digit "Smart" Alphanumeric Display
122 Cycle Testing AC Motor Controller
123 Controlling an LCD by BS2 via I2C Bus
124 The Newcastle Robotic Bilby Project
125 The EM1 (Electric mule)
126 Distance Measurement with GP2D02 SHARP Sensor
127 TI82 Interface
128 Operator Interface for Multiple Stamps
129 Infrared Glucose (Blood Sugar) Monitor
130 Fox For ham radio or Automated Propogation Beacon
131 GPS Data Overlay on Video
132 10Base-T Cable Tester
133 Kodak DC40/50/120 camera control
134 Implement S.N.A.P network protocol in a BASIC Stamp
135 Stamp/PC RS-485 Network
136 Easy-to-build BS keyboard/display w/ 10 keys/LEDs
137 Joystick control: BS2, 2 motors & 2 HBridges
138 Basic Stamp 2 Mobile Robot
139 Home Automation and Security System
140 UM3750 Read Code
141 Magnetic Stripe Reader
142 Telephone Remote Control and Remote Alarm
143 Tube preamplifier control section

144 Interrupt for PBASIC
145 dLOG
146 Compass
147 BS-2 serial VISCA interface
148 Servo tester
149 Small-bot
150 Repeater Controller
151 ESD Tester for Foot and Wrist Straps
152 Beneficial Insect Dispenser
153 Bugsey
154 Vector2X Compass Module with the new BS2SX Stamp
155 Serial Mouse to BS2 Interface
156 Radio Repeater Controller
157 Keypad reader
158 Automatic Vehicle Location / Mobile Asset Tracking
159 Interfacing a 4X4 keypad to the stamp II
160 Interfacing a Max186 8 Channel ADC to a stamp II
161 Realistic Manual Shifter for PC Driving Games
162 Contact ID handshake board
163 Basic Stamp II I2C protocol for several ICs
164 Home Controller
165 Coinmachine
166 Navigation system for the blind
167 Robot Fighters
168 Octobot
169 SPI interface chip
170 Implementing TCP/IP functionallity
171 Home Security System
172 Garage Door Opener
173 New Method Of Home Automation
174 Water Volume Meter
175 Table-Top Practice ROBOT for USFirst Competition
176 Model-rocket acceleration measurement
177 Interface to SPECTRON MICRO-50 2 Axis Inclinometer
178 Interface for electromechanical coinpasser
179 RCS (Remote Controlled Stepper)
180 Making robots really small
># 181 Basic Stamp Freezer Alarm
># 182 X-10 Command Expander
># 183 Slide Projector Timer
># 184 Complete Traffic Light Controller - RS232 display

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-

Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-

2346. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Bill Sloman <bill_sloman@my-deja.com>
Message-ID: <8b8fvt$mf5$1@nnrp1.deja.com>
Source record: 62285
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <8b86r4drl2@miranda.gmrc.gecm.com>,
richard.herring@gecm.com wrote:
> In article <8b7sei$6qa$1@nnrp1.deja.com>, Bill Sloman
(bill_sloman@my-deja.com) wrote:
>
> > Photons have no rest mass,
>
> So far, so good.
>
> > but e=mc^2 means that they all have some mass,
>
> No. The 'm' in E=mc^2 is the (rest) mass. That formula only applies
> in the rest frame, as it's a special case of the more general formula
> E^2 = p^2c^2 + m^2c^4 .

Live and learn.

> > and some of the shorter X-rays and gamma rays outweigh an
> > electron.
>
> They have more energy than an electron. They still have no mass.

So how do they manage to have momentum? Or is a light sail another
fallacy? And they interact with gravitational fields, which presumeably
implies that they have a gravitational mass, and can bend space on their
own account.

> > Such photons are - of course - very small.
>
> I don't think that's a meaningful statement.

Photons have wavelength, which has the dimension of length. Precisely
what sort of meaning were you looking for?

--
Bill Sloman, Nijmegen

Sent via Deja.com http://www.deja.com/
Before you buy.

2347. What is wrong with a crystal in my HW101

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <mTOB4.3042$D7.75965@news.itd.umich.edu>
Source record: 62286
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

Hello all:

My Heathkit HW-101 transceiver is having some trouble on the 28.000 to 28.500 band. I suspect the crystal or the crystal holder. The received band is intermittent. I once took the crystal out and looked at the holder. It seems as if the last owner "wallowed out" the insert where the crystal leg goes. I tried to fill in the gap by using AL foil on the leg and inserting it into the holder. It worked for a short time then nothing again.

Any suggestions?

Curtis Scholl
cscholl@izzy.net.

2348. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <$6H6I+Ad2414Ew01@jmwa.demon.co.uk>
Source record: 62287
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8b7sei$6qa$1@nnrp1.deja.com>, Bill Sloman <bill_sloman@my-deja.com>
inimitably wrote:
>Photons have no rest mass, but e=mc^2 means that they all have some
>mass, and some of the shorter X-rays and gamma rays outweigh an
>electron. Such photons are - of course - very small.

Bill, E = mc^2 can't be the whole justification. E = hv comes in as
well. That gives m = hv/c^2, which is why light is bent by gravity (but
not very much!). (h is Planck's constant and 'v' (which should be the
Greek 'nu') is the frequency of the photon radiation.

Still, thanks for posting, because it has given me the clue to refine
another post in this thread.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2349. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <q6T$IDBN8414Ew2G@jmwa.demon.co.uk>
Source record: 62288
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<slrn8dem0r.srg.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>
> >Photons, having no mass, are really quite big (;-).
>
>
> And does the photon's size "move" along with it, i.e., is the
> "size" geometrically related to to this photon? Can I hold up
> a measuring stick (in as generic a sense as required that allows
> pinning down the shape) as it goes by (by however impractical
> an experiment)?

Well, I have not been able to pursue this as far as I would like. The
basic idea, which I believe is orthodox physics, is that the rate of
fall of quantum-mechanical probability with distance from the 'most
probable' location is inversely proportional to the mass of the object.

So, electrons are not only much bigger than, say, protons, but are quite
'fuzzy' at the edges, since the rate of fall is very low. However,
extending that to the photon appears to require that the rate of fall is
zero, and thus the photon is infinitely large (and/or has no 'maximum
probability point'). Presumably then, relativistic contraction means
that it has no dimensions along the line of flight (in vacuo), so it is
just a doubly-infinite straight line perpendicular to its path. No
wonder they get entangled so easily. (;-)

However, photons carry energy, and, as Einstein showed, that energy is
equivalent to mass. The energy is E = hv (h is Planck's constant and v
is the frequency), and E is also mc^2, so that m = hv/c^2. Considering
that h is very small and c is very big, only photons whose v is very
high indeed (X-rays) have masses even comparable with that of an
electron, so most of them, especially 50 or 60 Hz photons (!), are
enormous.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2350. WTB: Kenyon T-656 transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Peter Laur <peter.laur@swipnet.se>
Message-ID: <38D7C6B8.37358557@swipnet.se>
Source record: 62289

Hello,

Im looking everywhere for a Kenyon T-656 plate transformer for my old
Harvey 80-T transmitter from 1936. This transformer was in a A6 case
meassuring 5" x 5" 1/8' x 5" and had a tappered 110VAC primary and
740-0-740 VAC secondary and rated 300mA.

If anyone out there knows where to find one, please write me directly...

73's de Peter / SM5HUA

2351. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38d7c620.16475760@news.eunet.yu>
Source record: 62290
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2352. Re: 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <38D7C8B3.60778847@umich.edu>
Source record: 62291

Robert Casey wrote:
>
> >> Modifying toy 49MHz walkie talkies for 6 meters:
> >>
> >You'd best be careful about the signal quality on the 'Talkie
> >you use. I had an old pair of Knight Kit walkie-talkies that
> >I built when I was a kid in the early 60's. They were on CB
> >channel 7, and I had a *blast* with them. Well, I pulled them
> >out for my kids a few years ago, and found out that they trash
> >the *entire* set of CB channels when transmitting. The newer
> >49MHz talkies may not be any cleaner than the ones I had.
> >
> I checked them for this, they're not bad. Wouldn't drive a linear
> with them though. The modern versions must be a better design than
> the old CB ones years ago. Oh, yeah, you can hear one of these talkies
> in receive mode; superregenetive sets emit some noise in receive.
> I have what the package claims "4 Transistor design", per unit.

Actually, I'm not even talking about the regen circuit. Yes, it
sends out noise, but when the old talkie was keyed up, a CB about
20 feet away hits S9 on *any* channel. THAT's a bad signal!
Obviously your mileage may vary.

73 de Bob, KI8AB

2353. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: meron@cars3.uchicago.edu
Message-ID: <i6QB4.145$K7.2465@uchinews>
Source record: 62292
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <8b8fvt$mf5$1@nnrp1.deja.com>, Bill Sloman <bill_sloman@my-deja.com> writes:
>In article <8b86r4drl2@miranda.gmrc.gecm.com>,
>richard.herring@gecm.com wrote:
>> In article <8b7sei$6qa$1@nnrp1.deja.com>, Bill Sloman
>(bill_sloman@my-deja.com) wrote:
>>
>> > Photons have no rest mass,
>>
>> So far, so good.
>>
>> > but e=mc^2 means that they all have some mass,
>>
>> No. The 'm' in E=mc^2 is the (rest) mass. That formula only applies
>> in the rest frame, as it's a special case of the more general formula
>> E^2 = p^2c^2 + m^2c^4 .
>
>Live and learn.
>
>> > and some of the shorter X-rays and gamma rays outweigh an
>> > electron.
>>
>> They have more energy than an electron. They still have no mass.
>
>So how do they manage to have momentum?

Momentum, in general, is not related to mass.

>Or is a light sail another fallacy?

No, not at all.

>And they interact with gravitational fields, which presumeably
>implies that they have a gravitational mass,

Again, no. Gravity shapes space (space-time, more exactly),
everything in this space time acts accordingly. No mass required.

>and can bend space on their own account.

They've enery.

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

2354. Re: Radio plans?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <953634409.885058873@news.indigo.ie>
Source record: 62293

Calvin Patrick <linhack@freewwweb.com> wrote:
>I'm looking to get started into Amateur Radio, an was wondering where
>would be a good place to start, and where I could get the plans to build
>my own radio.

Get a copy of Solid State Design for the Radio Amateur (ARRL)
and/or The ARRL Handbook.

Have a look at: http://www.qsl.net/ei9gq

73, Ed. EI9GQ.

--
Remove 'X' to reply

2355. Re: What is wrong with a crystal in my HW101

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-21 00:00:00 UTC
From: "Gump, B." <nospam@nospam.com>
Message-ID: <38D7C654.DBF@nospam.com>
Source record: 62294
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

Curtis Scholl wrote:
>
> Hello all:
>
> My Heathkit HW-101 transceiver is having some trouble on the 28.000 to
> 28.500 band. I suspect the crystal or the crystal holder. The received band
> is intermittent. I once took the crystal out and looked at the holder. It
> seems as if the last owner "wallowed out" the insert where the crystal leg
> goes. I tried to fill in the gap by using AL foil on the leg and inserting
> it into the holder. It worked for a short time then nothing again.
>
> Any suggestions?

Most likely the crystal holder was 'wallowed out' from constant changing
with another crystal---TO GET ON THE CB BAND BREAKER BREAKER BROKE C'MON
SKIPLAND... best just to replace the holder. Those HC-6U holders are
fairly easy to find. Maybe, with the use of a small screwdrive you can
squeeze the prongs together to get a tighter grip on the pins. Maybe
you can desolder one end of the pin and straighten it in order to push
it through the holder to squeeze it together with pliers---then replace.

Sincerely

2356. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <XbLgABBgBJ24EwbB@jmwa.demon.co.uk>
Source record: 62095
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<%nXB4.178$K7.3271@uchinews>, meron@cars3.uchicago.edu inimitably wrote:
>Check under "Compton scattering".
What he used to do to Aussie fielders? (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2357. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: meron@cars3.uchicago.edu
Message-ID: <5c9C4.207$K7.3795@uchinews>
Source record: 62096
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <JbjnA$AAAJ24Ew5r@jmwa.demon.co.uk>, John Woodgate <jmw@jmwa.demon.co.uk>
writes:
><8b9eo1$t10$1@news.fsu.edu>, Jim Carr <jac@dirac.scri.fsu.edu>
>inimitably wrote:
>>Sorry, I forgot about the preposterously broad cross-post. This
>> is such an FAQ that I typed that automatically.
>>
>> We always use 'p' to denote momentum, and in this case it is
>> the familiar 3-vector momentum, albeit the relativistic one.
>
>Thanks. Clearly something has happened to 'momentum' since I learned
>about it long years ago, that I haven't seen explained anywhere. I
>learned that momentum (for things like billiard balls) was mass times
>velocity.

Nope. The momentum of a massive particle, in Newtonian mechanics, is
mass times velocity. Momentum in general can be many different
things.

It is important to read equations properly. Suppose I write the
Newtonian expression for kinetic energy, i.e.

E = (m/2)*v^2

Now, this doesn't read "Energy is half mass times velocity squared"
What is says is "The energy associated with the motion of a body is
half mass times velocity squared". An important distinction. Do you
see it?

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

2358. Re: HELP! How to replace TS-440 meter lamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Clif Holland <clif@avvid.com>
Message-ID: <38D9267D.7557@avvid.com>
Source record: 62097

John Smith wrote:
>
> Does anyone know how to replace the meter lamp on a Kenwood TS-440S? Does
> Radio Shack have a bulb that will work or do I have to get one from Kenwood?
> Also, I have partially disassembled the radio and tilted the front display
> unit down. The meter lamp is buried very deep inside. Is this even possible
> by a non-professional? All advice is welcome!
>
> Thanks,
> John N7MTB

Take out the 2 screws that hold the vox switch in place. The bulb is
easy to replace then.

--
Clif Holland, KA5IPF
Owner of AVVid, an Authorized Kenwood and Icom Service Center
For more info click on the following
http://www.avvid.com/
or call 1-800-214-5779

2359. Re: Energy sucking sucked your bandwidth!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38D932FD.1E23@pop.removethistomailme.net>
Source record: 62098

gudmundur wrote:
>
> Was it just a troll. Why so many replies? When you see an article
> has 5 or 6 replies, why add more? Did he outsmart the distance
> squared law? No, only his original post sucked anything!

Dunno, but I wish these rocket scientists would either build a fractal energy-sucking space modulator and document its performance and construction details, or go fill some other newsgroup with their noise!

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2360. dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <38D94A26.BCC165D9@software.com>
Source record: 62099

I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated at 20 W each. I was thinking of paralleling them and building a dummy load.

My question: how much power can such a thing handle, continuously? I imagine it could tolerate 40 W intermittently, but how much should I derate it for continuous use? 50%? 70%?

I'm considering doing the "Cantenna" thing and putting the resistors in oil inside a paint can. I have several questions on this topic! :-)

1) how much will this increase the continuous rating of the load?

2) where can I get transformer oil??? Will 10W40 do?

3) shouldn't the resistors really be mounted at the bottom of the can, so convection in
the oil can help distribute the heat? Would this make enough difference to make the
mechanical problems of mounting the RF connector to the side and sealing it worth
the trouble?

and finally,

4) do I immerse the resistors right in the oil, or is some sort of covering needed?

thanks and best regards,
nick
kb1dej

2361. Re: Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38D9477E.B3932254@valley.net>
Source record: 62100

aa1pd@yahoo.com wrote:

> Hi all,
>
> I have just ordered a PK-3 keyer board and parts from morsex which I
> plan to build and mount in an altoids box. My question is about what
> would be the best way to keep the small pc board suspended above the
> bottom of the altoids tin. In a commercial kit they often use little
> sockets that you screw the board into but what do you savvy homebrewing
> types like to use as standoffs.
>

Hello--

If the PC board include bottom-side traces or through-hole components,
you might try using small plastic beads with center holes that'll pass the
board's mounting hardware. A visit to any store that sells arts'n'crafts
supplies should have suitably-sized beads.

You can also use double-sided foam sticky tape to attach the board to the
tin, or blobs of hot-melt glue.

73,
Brad AA1IP

2362. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <8vcidsgpd8eon80u32oq0odb3ijkapatoq@4ax.com>
Source record: 62101
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

On Wed, 22 Mar 2000 09:53:31 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:

><fn1gdso8anlckmihnealo9o66jj1hk84qn@4ax.com>, James Meyer
><notjimbob@earthlink.net> inimitably wrote:
>>My good buddy Albert says that light *isn't* affected by gravity. He
>>says that light always travels in a straight line. He says that it's space its
>>self that gets bent by gravity. The light just takes the shortest path which is
>>a straight line which only "looks" bent.
>
>I really think that is semantics, or maybe philosophy. Every test we
>could apply shows that the path is not straight, so what is the point of
>maintaining that is 'is' in some abstract way. I don't think he did his
>cause any good with such 'explanations'. Of course, in those days it was
>not unusual to mix philosophical statements with scientific ones, and
>the practice is not entirely dead even today.

The reason I think the straight line idea has merit is that if the
bending is due to some idea that the energy/mass equivalence is at work, then
high energy/mass photons should curve less than low energy/mass photons. And I
haven't seen any evidence of that being the case.

Jim

2363. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D95FEB.32A0B528@agilent.com>
Source record: 62102
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I did some playing with "real" numbers on this. If anyone would like the MathCad worksheet I used, just email me. In summary, I assumed a piece of coax 0.9 times a quarter wave long on 160MHz. I ran it for both RG-8-type and RG-11-type coax, each 0.285 inches dielectric diameter, each 0.66 velocity factor (solid polyethylene dielectric). So, that's an 0.278 meter length of line. That tunes with a small capacitance on the open end: about 2.1pF for 75 ohm line and 3.15pF for 50 ohm line. You need to put a very low inductance across where the stub attaches to the thru line to tune it to minimum reactance at the pass frequency (I assumed 146MHz). It's about 8 nanohenries at 75 ohms and 5.5 at 50. You could get the inductance from a short shorted stub. (Note: then it looks like the line is tapped up on a coaxial resonator...this is pretty general: make a resonator, shorted at one end and open at the other. Tap the thru-line up on it; adjust the tap point to adjust the notch frequency.) At the null frequency, the RG-11 trap looks like about 0.155 ohms resistive across the thru line, and the RG-8 looks like about 0.092 ohms. That hints at the depth of the notch: 50 dB or so. At the pass frequency, assuming the tuning coil has an unloaded Q of 100, the RG-11 trap plus inductor look like about 273 ohms, and the RG-8 system looks like about 196 ohms. I'd personally opt for the lower disturbance of the RG-11 trap...or use larger trap coax to get to lower pass-frequency loss.

With luck I didn't make too many math mistakes, and I hope this will be useful and interesting to someone out there!

Cheers,
Tom

Tom Bruhns wrote:
>
> I think you understood just fine, Jan-Martin. As J-M says, you should
> add some parallel inductance where the stub attaches, to cancel the
> stub's capacitive reactance at 144MHz.
...etc

2364. Satellite Cable Length

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: drbadboy@hotmail.com
Message-ID: <MPG.13433598a7ce8856989683@news.sofnet.com>
Source record: 62103

""""Please forgive me if this is the wrong place to post""

This may be a stupid question but I would like to know if the RG-6u coax length would make any difference in the signal strength of the DSS SATELLITE and HUGHES DIRECPC SATELLITE if so does anyone know how each should be configured so I might get a stronger signal Please e-mail me. Thanks in Advance

2365. Deep Cycle Batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: dm <dmandjos@olypen.com>
Message-ID: <SzhC4.24080$oc.505456@news5.giganews.com>
Source record: 62104
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Thanks for all the good info, fellas. Hope to see you all on the air. 73
"DM" N 7 D M

2366. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8bcg22$ea7$1@newcastle.cs.ubc.ca>
Source record: 62105

Nick Caruso <nick.caruso@software.com> writes:
>I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
>at 20 W each. I was thinking of paralleling them and building a dummy load.

You should investigate what the "noninductive" label actually means.
In some cases at least, such resistors are actually resistance wire
wound as a coil on an insulating rod. The noninductive versions
use a bifilar winding, so half the turns are carrying current in
one direction and the other half carry it in the other direction.
In theory, the magnetic fields cancel and you get a noninductive
resistor. But there's probably some residual inductance - not enough
to be troublesome at audio frequencies, but possibly a problem for RF.

Dave

2367. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Russ <russell@webaxs.net>
Message-ID: <38D819D2.E1EEEB55@webaxs.net>
Source record: 62161

You can get pcairl from:

http://www.web-span.com/alk/

There was a feature on it written in a past issue of RF Design iirc.

Dave Martindale wrote:
>
> russell shaw <russell@webaxs.net> writes:
> >Do a net search for 'pcairl.exe'. Its a dos program made for small coils
> >with few turns.
>
> Are you sure that's the right spelling? Several different search
> engines (altavista, yahoo) weren't able to find a single reference.
>
> Dave

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2368. WTB 1KW Output Amplifier

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: bshort@speedchoice.com
Message-ID: <MPG.13422d5e4fe4d75a989806@news.speedchoice.com>
Source record: 62162
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

WTB 1KW Output Amplifier

Looking for a GOOD amplifier in the 1KW output class and in the
$450 price range. Also considering the Alpha 374 (3 tube).
Please send a description of what you have available, condition,
model, location, etc. Can pick it up in Arizona, Las Vegas, San
Diego, etc. I am amp-less and ready to buy.

--
k7on@arrl.net >or< http://www.qsl.net/k7on/
--

2369. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Maarten Hoogerland <Maarten.Hoogerland@anu.edu.au>
Message-ID: <38D83010.4E7EE06B@anu.edu.au>
Source record: 62163
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Ken wrote:
>
> Bill Sloman wrote:
>
> > > They have more energy than an electron. They still have no mass.
> >
> > So how do they manage to have momentum? Or is a light sail another
> > fallacy? And they interact with gravitational fields, which presumeably
> > implies that they have a gravitational mass, and can bend space on their
> > own account.
>
> Do photons have mass?
>
> Not that anyone can measure. The upper limits to the photon mass range from
> 10^-40 to 10^-60 grams depending on the method used. All methods compare
> Maxwell's equations for a massless photon with one including a mass, and
> then examine many different electrodynamic systems in the universe at
> larger and larger scales to search for deviations. None have ever been
> found, and the scale of the system, from Heisenberg's Uncertainty Principle,
> essentially sets the upper limit to the maximum mass allowable by the test.
>
Although the photon has no rest mass, it does have momentum p=h/lambda.
If it
collides with something, it can transfer this momentum. For macroscopic
objects, the
force is small, but for something small, like an atom, huge forces can
be involved. This has given birth to a large area of physics that
studies the cooling and trapping of neutral atoms with light, and the
1997 Nobel prize has been awarded to some prominent researchers in the
field. So far the ad.

> As far as solar sailing a better question might be whether photons can
> exert pressure. There is quite a bit of evidence to support the claim
> that they indeed can. In fact many argue that the pressure exerted by
> photons are instrumental in describing some of the physics taking place
> in newly formed stars which might otherwise collapse back into themselves
> were it not the for the internal photon pressure acting upon them.
>
Not only in newly formed stars.....

2370. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <fn1gdso8anlckmihnealo9o66jj1hk84qn@4ax.com>
Source record: 62164
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

On Tue, 21 Mar 2000 19:44:59 +0000, John Woodgate <jmw@jmwa.demon.co.uk> wrote:

><8b86r4drl2@miranda.gmrc.gecm.com>, Richard Herring
><rnh@gmrc.gecm.com> inimitably wrote:
>>They have more energy than an electron. They still have no mass.
>
>You could say that, but then you have to explain separately why light is
>affected by gravity.

My good buddy Albert says that light *isn't* affected by gravity. He says that light always travels in a straight line. He says that it's space its self that gets bent by gravity. The light just takes the shortest path which is a straight line which only "looks" bent.

If light were affected by gravity, it would make sense to me that red light with less energy would be affected less than blue light with more energy. Have you ever heard that white light gets split up into a rainbow as it passes by something like the sun?

There are things called "gravity lenses", but AFAIK they are achromatic lenses.

A search of the internet using "gravity lens" turned up some information. The sad thing was that fully two thirds of the sites found were concerned with crack-pot new-age bullshit.

One decent looking page was:
http://faraday.physics.utoronto.ca/PHY100F/relgen.htm

Jim

2371. Re: WTB: Schematic for Agrelo DFjr antenna array

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: dvanhorn@cedar.net
Message-ID: <38d86627.79729259@news1.rdc1.il.home.com>
Source record: 62165
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.digital.misc,rec.radio.amateur.antenna,rec.radio.amateur.homebrew,rec.radio.amateur.misc

On Tue, 21 Mar 2000 04:13:35 -0700, "Dan" <dand@truvalue.com> wrote:

>Hi All,
>
> I am in desperate need of a schematic and parts list w/ numbers for the
>Agrelo DFJr. antenna array. The J. Agrelo story is just too painful so I'll
>spare you the details.
>Thanks to Steve, WA3SWS for the info he sent me.
>This unit had RF applied to the RX port and the little rx amps are blown.
>Looking for those parts numbers.

Mini-Circuits MAR4 or MAR 6 will work as replacements.
Add neon lamps at the antennas, and the cable connection, to prevent
future problems.

"One who knows" :)

2372. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <s8dgdss5queh7eqbojib9ijaopgnm4lei2@4ax.com>
Source record: 62166
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

On Wed, 22 Mar 2000 13:29:36 +1100, Maarten Hoogerland
<Maarten.Hoogerland@anu.edu.au> wrote:

>Although the photon has no rest mass, it does have momentum p=h/lambda.
>If it collides with something, it can transfer this momentum.

So after it has bounced off an object and transferred some momentum, its
wavelength should be longer, right?

If it could transfer momentum without losing any energy, Tesla would
surely have claimed the patent on the phenomenon. 8-)

Jim

2373. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: jac@dirac.scri.fsu.edu
Message-ID: <8b9eo1$t10$1@news.fsu.edu>
Source record: 62167
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In <8b82d8ebk1@news.fsu.edu>,
Jim Carr <jac@dirac.scri.fsu.edu> inimitably wrote:
|
| E = sqrt{ (mc^2)^2 + (pc)^2 }
|
| For a photon, with a mass m less than 2 x 10^{-16} eV/c^2, this
| reduces to E = pc for all photons of interest, not E = mc^2.
|
| You get E = mc^2 when p = 0.

In article <C$VlpeAVD914EwDe@jmwa.demon.co.uk>
John Woodgate <jmw@jmwa.demon.co.uk> writes:
>
>You must be right, of course, because you haven't defined 'p'. (;-)

Sorry, I forgot about the preposterously broad cross-post. This
is such an FAQ that I typed that automatically.

We always use 'p' to denote momentum, and in this case it is
the familiar 3-vector momentum, albeit the relativistic one.

--
James A. Carr <jac@scri.fsu.edu> | "The half of knowledge is knowing
http://www.scri.fsu.edu/~jac/ | where to find knowledge" - Anon.
Supercomputer Computations Res. Inst. | Motto over the entrance to Dodd
Florida State, Tallahassee FL 32306 | Hall, former library at FSCW.

2374. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: jac@dirac.scri.fsu.edu
Message-ID: <8b9es5$t16$1@news.fsu.edu>
Source record: 62168
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

... followups to relativity newsgroup ...

In <8b86r4drl2@miranda.gmrc.gecm.com>,
Richard Herring <rnh@gmrc.gecm.com> inimitably wrote:
}
} They have more energy than an electron. They still have no mass.

In article <KfenRgA7E914EwgL@jmwa.demon.co.uk>
John Woodgate <jmw@jmwa.demon.co.uk> writes:
>
>You could say that, but then you have to explain separately why light is
>affected by gravity.

Not so. If you use m = E/c^2 as a gravitational mass, you also do
not explain effects observed in nature. General Relativity is not
so simple, as is explained in the Relativity FAQ.

--
James A. Carr <jac@scri.fsu.edu> | "The half of knowledge is knowing
http://www.scri.fsu.edu/~jac/ | where to find knowledge" - Anon.
Supercomputer Computations Res. Inst. | Motto over the entrance to Dodd
Florida State, Tallahassee FL 32306 | Hall, former library at FSCW.

2375. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: meron@cars3.uchicago.edu
Message-ID: <%nXB4.178$K7.3271@uchinews>
Source record: 62169
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <s8dgdss5queh7eqbojib9ijaopgnm4lei2@4ax.com>, James Meyer
<notjimbob@earthlink.net> writes:
>On Wed, 22 Mar 2000 13:29:36 +1100, Maarten Hoogerland
><Maarten.Hoogerland@anu.edu.au> wrote:
>
>>Although the photon has no rest mass, it does have momentum p=h/lambda.
>>If it collides with something, it can transfer this momentum.
>
> So after it has bounced off an object and transferred some momentum, its
>wavelength should be longer, right?
>
Check under "Compton scattering".

Mati Meron | "When you argue with a fool,
meron@cars.uchicago.edu | chances are he is doing just the same"

2376. small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <IMXB4.203$DY4.24347@typhoon1.gnilink.net>
Source record: 62170

Does anyone know of a low-noise, small-signal FET op. amp. type number that will work as a differential RF amp. up to 30 MHz? The 97 arrl handbook suggests a Harris
HFA-1102, but I am told that Harris is out-of-business?

Also, can slightly mis-matched components be tolerated or compensated for afterwards, if one were to homebrew an op. amp. out of discrete components?

Tnx, Ed W. K3FDY

2377. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: jtbell@presby.edu
Message-ID: <Frt4MC.JnB@presby.edu>
Source record: 62171
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

James Meyer <notjimbob@earthlink.net> wrote:
>On Wed, 22 Mar 2000 13:29:36 +1100, Maarten Hoogerland
><Maarten.Hoogerland@anu.edu.au> wrote:
>
>>Although the photon has no rest mass, it does have momentum p=h/lambda.
>>If it collides with something, it can transfer this momentum.
>
> So after it has bounced off an object and transferred some momentum, its
>wavelength should be longer, right?

Yes. It's called "Compton scattering" and is usually discussed in physics
textbooks in connection with scattering photons off of electrons.

--
Jon Bell <jtbell@presby.edu> Presbyterian College
Dept. of Physics and Computer Science Clinton, South Carolina USA
[Information about newsgroups for beginners:]
[http://www.geocities.com/ResearchTriangle/Lab/6882/]

2378. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dgo4d.srg.root@radioactivex.lebesque-al.net>
Source record: 62172
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

>basic idea, which I believe is orthodox physics, is that the rate of
>fall of quantum-mechanical probability with distance from the 'most
>probable' location is inversely proportional to the mass of the object.
>
It's inversely proportional to the uncertainty in its momentum.

>So, electrons are not only much bigger than, say, protons, but are quite

Except that scattering puts a limit on their rms charge radius at
< 10^17 m. You may equate their "size" the probability of finding
them in some area determined by the circumstances, like an
atomic transition, but then you have the definition of a cross
section. The relation of the cross sectional area to the mass
is just the phase space factor in fermi's golden rule.

>zero, and thus the photon is infinitely large (and/or has no 'maximum
>probability point'). Presumably then, relativistic contraction means
>that it has no dimensions along the line of flight (in vacuo), so it is

Suppose an observer at the origin has a source that emits a photon
at time t=0 within the limits of the uncertainty principle. From
that observers perspective, the photon be anywhere, since he
can no longer reach a distance the photon cannot have yet reached.

>just a doubly-infinite straight line perpendicular to its path. No

However, any path is perpendicular to its path, including its
own. the momentum q, is perpendicular to itself, q^2 = 0.

>However, photons carry energy, and, as Einstein showed, that energy is
>equivalent to mass. The energy is E = hv (h is Planck's constant and v

What he didn't say is that it means you can always find an independent
object corresponding to that mass. When a 13.2 eV photon is absorbed
by a hydorgen atom in its g.s., the resulting electron and proton
have a larger mass than the hydrogen atom. That doesn't mean you
can find that 13.2 eV mass in a representation free way (i.e. its own
little chunk of stuff). I think it works better to interpret both
masses and energies as momenta and c as a scaling factor.

>is the frequency), and E is also mc^2, so that m = hv/c^2. Considering

In E = mc^2, m is understood to be a rest mass which requires an inertial
frame (p=0) to define. Without defining an inertial frame, you're stuck
with:

Etot = Ekinetic + Erest

E^2 = p^2 + m^2 (I set c = 1 so E=mc^2 reduces to E = m)

but E^2 isn't invariant, E^2 - p^2 is.

For a particle with a rest mass, when p = 0, E = m, or with the
c^2, E = mc^2. If m = 0, then E^2 - p^2 = 0, which is fine
so long as E = p (or with the c back in place E = pc).

Or in other words, For a given E, you cant find m unless you
know p. Using the four-momentum that is just defined by the
invariant E^2 - p^2 to be q = (E, p) = (p0, p1, p2, p3).
you get the einstein condition for a free photon:

q^2 = p0^2 - px^2 -py^2 -pz^2 = E^2 - p\cdot p = 0.

According to relativity, the norm of the photon four-momentum is
identically 0.

>that h is very small and c is very big, only photons whose v is very
>high indeed (X-rays) have masses even comparable with that of an
>electron, so most of them, especially 50 or 60 Hz photons (!), are
>enormous.

Taking your argument literally, it means more; they extend over all of
space, since you have a monochromatic photon or in other words,
your source has been on infinitely long and the photon is produced by
an interaction with a lifetime of infinity (or a probability of zero)
and in still other words is not observable. So, you need a spread in
frequencies constructed as a packet that is sharply peaked at the
frequency of interest. If the uncertainty in energy is \delta E,
the process that produced it can be determined in time with an accuracy
constrained by \Delta E \Delta t =~ \hbar. That means \Delta t
that is the uncertainty in emission time is \hbar/\Delta E.
If it's uncertain by \Delta t when the photon was emitted, it's
uncertain by a distance c \delta t, where it is. If that interval
represents the bulk of the probability (in a gaussian it's the 1/e
point so it does), then that's how "big" you'll call the photon.
I leave it to you to find reasonable limits on \delta E for
a photon of energy E and what happens for "bigger photons"
(\Delta t large) and "smaller photons" (\Delta t small) before
it isn't clear what E should be or how long you should wait before
seeing one from the source.

2379. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dgpcr.srg.root@radioactivex.lebesque-al.net>
Source record: 62173
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

><8b86r4drl2@miranda.gmrc.gecm.com>, Richard Herring
><rnh@gmrc.gecm.com> inimitably wrote:
>>They have more energy than an electron. They still have no mass.
>
>You could say that, but then you have to explain separately why light is
>affected by gravity.
>--

OK. Suppose you drop a mass from a height h and suppose you convert its
mass and the kinetic energy it gains by falling into a photon with an
energy equal to mc^2 + the kinetic energy. (you can argue for a fractional
anount, too). Unless the photon loses the kinetic energy gained by the
falling mass in order to climb in the field (is red shifted), you
can create perpetual motion, since you have more energy at the point
you dropped the mass than the mass had to begin with. Converting
the photon back into a mass gives you a bigger mass than you originally
dropped.

2380. is #electronics the most lame ass channel on IRC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sdgt9tu9lul43@corp.supernews.com>
Source record: 62174

Ever go there? Seems that 'Explosion', and 'Helltrix' must be
24 hour cablemodem logins, with no life behind the name. Sometimes
I see 5 or 6 logins, and no chat on the main channel, and no reply
to any questions asked there. What gives? An exclusive club of
rocket scientists with a secret password? Ha, I doubt it. Maybe they
will be impressed with my soon to be released book 'Mensa for Dummies'.

73 Gummi

2381. Energy sucking sucked your bandwidth!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sdgv0pj4lul26@corp.supernews.com>
Source record: 62175

Was it just a troll. Why so many replies? When you see an article
has 5 or 6 replies, why add more? Did he outsmart the distance
squared law? No, only his original post sucked anything!

2382. Re: What is wrong with a crystal in my HW101

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sdgtkmqklul172@corp.supernews.com>
Source record: 62176
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

In article <mTOB4.3042$D7.75965@news.itd.umich.edu>, cscholl@izzy.net says...
>
>Hello all:
>
> My Heathkit HW-101 transceiver is having some trouble on the 28.000 to
>28.500 band. I suspect the crystal or the crystal holder. The received band
>is intermittent. I once took the crystal out and looked at the holder.

Two thoughts come to mind.
1 the crystal may be intermittant. They sometimes make poor contact internally. This can occur if the hermetic seal is damaged, and the crystal contacts have oxidised inside.

2 the oscillator coil needs tweaked. if you tune to peak oscillator output, the circuit becomes hard to start, and sometimes will oscillate only intermittantly, dependant on temperature and voltage changes.
73 Gummi

2383. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38D88BA2.7E9AB835@nospam.gecm.com>
Source record: 62177
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Lyle Koehler wrote:

>
> "To adjust R1 for maximum energy (matched impedance), we set R1 equal to
> the series reactance created by
> the voltage divider, which is 1/(2*pi*f*100pF) or approximately 3.2K
> ohms."
>
> This statement reflects a complete misunderstanding of impedance
> matching. The impedance of the capacitor is 0 -j3200. The impedance of
> the resistor is 3200 -j0 (or 3200 +j0, if you prefer). The _magnitudes_
> of the impedance are the same in both cases, but one is totally
> reactive; the other is totally resistive. To get maximum power transfer,
> you need a _conjugate_ match, which requires an impedance of 0 +j3200
> in series with the capacitor.
>

Lyle - I agree with you up to a point. It's absolutely right that max
power is extracted with a conjugate match and the process produces
a tuned circuit. But if the source impedance is a resistance in series
with a reactance, and you are only allowed to use a load resistance
without any reactance, then maximum power (at a lower level) occurs
when the load resistance is equal to the modulus of the source
impedance. I think that's what he is trying to say. It's a modulus match
and can be used when wideband performance is required.
Alan

2384. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38D88E7E.5C131A39@nospam.gecm.com>
Source record: 62178
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Lyle Koehler wrote:

> The "effective area" of an antenna is equal to G*(wavelength
> squared)/(4*Pi), where G is the directive "gain". For a very small
> dipole, G is 1.5. Multiply this area by the incident power density and
> you know how much power is theoretically available from the antenna
> terminals. This area is much greater than the physical size of the
> antenna, which causes a lot of confusion even among people who claim to
> http://www.computerpro.com/~lyle

Lyle - thanks for that, I agree with all of it. Maybe the thread should
be
re-entitled "energy sucking complicated". Alternatively, maybe the only
energy being sucked is that of all the contributors who, instead of
watching TV or doing something else that's useful, prefer to expend their
energies on enlightening people who might prefer to remain unenlightened
on the available evidence.
Alan

2385. Re: Energy sucking sucked your bandwidth!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: sbishay@mindspring.com
Message-ID: <38d8a06f.265009841@news.mindspring.com>
Source record: 62179

On Wed, 22 Mar 2000 07:54:01 GMT, hexter@blazenet.net (gudmundur)
uttered forth the following:

> Was it just a troll. Why so many replies? When you see an article
>has 5 or 6 replies, why add more? Did he outsmart the distance
>squared law? No, only his original post sucked anything!
>

Who's the troll now, pal?

Stefan Bishay - KC7SJC
Seattle, WA
Pacific NW Isuzu Off-Roaders
http://www.mindspring.com/~sbishay

2386. HELP! How to replace TS-440 meter lamp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: John Smith <jsicotte@nospam.earthlink.net>
Message-ID: <Dx2C4.18790$kv6.1062721@newsread1.prod.itd.earthlink.net>
Source record: 62180

Does anyone know how to replace the meter lamp on a Kenwood TS-440S? Does Radio Shack have a bulb that will work or do I have to get one from Kenwood? Also, I have partially disassembled the radio and tilted the front display unit down. The meter lamp is buried very deep inside. Is this even possible by a non-professional? All advice is welcome!

Thanks,
John N7MTB

2387. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38D8E809.BA5BEC8C@home.com>
Source record: 62181

Harris is now Intersil (that's what it was before Harris bought them - back when Harris was in the printing business). Intersil just did an IPO so they appear to be alive and well. I haven't been to their site in a long time, but they are on the web.

K3FDY wrote:

> Does anyone know of a low-noise, small-signal FET op. amp. type number that
> will work as a differential RF amp. up to 30 MHz? The 97 arrl handbook
> suggests a Harris
> HFA-1102, but I am told that Harris is out-of-business?
>
> Also, can slightly mis-matched components be tolerated or compensated for
> afterwards, if one were to homebrew an op. amp. out of discrete components?
>
> Tnx, Ed W. K3FDY

2388. 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000322085251.009a6f00@pop.uky.edu>
Source record: 62182

>Look at Elenco's 6 and 2 meter receiver kit?

http://www.elenco.com/dlxkits.htm#ar2n6k

It think this one is interesting. It also comes with a training
manual and the student learns more than just how to solder.
Their other kits AM and AM/FM receiver kits are good educational
tools for young students.

http://www.elenco.com/amfm108c.jpg

73
Bill wa4lav

2389. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8baksh$g1e$1@uranium.btinternet.com>
Source record: 62183

Use a pair of small-signal FETs. For balancing out common-mode inputs,
connect a pot between the two sources with the slider to ground via
another resistor or via a constant current source. Just the same as a
pair of triode tubes.

Reg

2390. Re: Better estimates of inductance for few-turn coils?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Jim Potter <jpotter@jpaw.com>
Message-ID: <o1lhdscg9bqfu70mp9feide6ojrqajcfvs@4ax.com>
Source record: 62184

davem@cs.ubc.ca (Dave Martindale) wrote:

>I originally posted this in sci.electronics.components, but it occured
>to me I might get a better answer here. This is a composite of two
>postings in that group:
>
I have found that the L/C Meter IIB from AADE (Almost All Digital
Electronics) is a very handy device. For $99 (kit), %129 (wired) it is
reasonably precise and useful for inductances below 100 nhy (most
other inexpensive inductance meters are worthless below 1 uhy.

It's available at: http://www.mtechnologies.com/aade.htm#lcm

The circuit is very clever. It contains an LM311 comparator set up up
as an LC oscillator. The internal capacitance is trimmed to 0.5% by
the manufacturer. It is self calibrating. Knowing the capacitance the
internal inductance is calculated. The change in frequency with an
inductor in series or a capacitor in parallel is used to calculate the
inductance or capacitance. All of this is done on an internal
microprocessor. There are several variations on how the data is
displayed. Very neat. And the packaging is reasonable for such an
inexpensive instrument. I own 3.

Recently I purchased an HP4192A for $5,000. Yesterday I did a
comparison test on a large 350 uhy coil. It measured within 1% of the
same value on both instruments.

Jim Potter

2391. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38D8D98D.9421922B@mlecmn.net>
Source record: 62185
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Alan Boswell wrote:
>

> Maybe the thread should be
> re-entitled "energy sucking complicated". Alternatively, maybe the only
> energy being sucked is that of all the contributors who, instead of
> watching TV or doing something else that's useful, prefer to expend their
> energies on enlightening people who might prefer to remain unenlightened
> on the available evidence.

That fact is slowly sinking in, after months of watching the energy sucking advocates persistently refuse to accept the suggestion that none of this is "new" science. I'm gonna duck out of this thread and catch up on my soaps.

--
Lyle, K0LR

http://www.computerpro.com/~lyle

2392. FS MP 4cx800a 4cx400

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: w4th@webtv.net
Message-ID: <17209-38D8DEDA-4@storefull-103.iap.bryant.webtv.net>
Source record: 62186

I am taking orders for 4cx400/gs36b Svetlana nos Russian Military tubes.
The price is $85.00 plus shipping per tube. These tubes are in great
shape and have never been used.
I also have in stock several matched pairs
of 4cx800a/gu74b Svetlana nos tubes. These are the tubes for the Alpha
91b/99 QRO-2500, the Acom-2000, and the Emtron amp from Australia. The
price on these matched pairs is $200.00 plus shipping. This is a great
buy on these nos unused tubes. A single 4cx800a from most places will
cost you $175.00 to $190.00, but these are matched pairs for about the
same price as a single tube. These tubes carry a 90 day warranty from
the Russian distributor.
Thanks for your time.
73
Tom
W4TH

2393. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bavb9$n0d$1@uranium.btinternet.com>
Source record: 62187
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Lyle wrote
> > Maybe the thread should be
> > re-entitled "energy sucking complicated"
>
> That fact is slowly sinking in, after months of watching the energy
> sucking advocates persistently refuse to accept the suggestion that
none
> of this is "new" science.
==========
When my inverted-L is transmitting low power on 160m, and my
experimental 6 feet diameter 160m magloop is tuned up in the same
backyard, it collects enough power to burn holes in fingers. Now
that's REAL energy sucking. Easily numerically predictable by ancient
arithmetic. But doesn't make such exciting conversation !

Reg.

2394. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D901BE.38870471@agilent.com>
Source record: 62188
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

I think you understood just fine, Jan-Martin. As J-M says, you should add some parallel inductance where the stub attaches, to cancel the stub's capacitive reactance at 144MHz. It's not the stub's Q, so much, as the reactance. If you use an "open" quarter wave stub, you should do something to extend the shield over the open end of the center conductor. You can also put a small variable capacitor across the open end to make it tuneable (maybe inside a little shield box); shorten the stub a little if you're going to do that. Use low loss line to get the greatest attenuation.

Since the stub will reflect nearly a short where it attaches to the feedline, another quarter wave back toward the antenna from there, you'll be looking into nearly an "open." If you put a second copy of the stub at that point (complete with paralleled inductor), it will be significantly more effective, because the signal will divide between the near-short of the stub and the near-open of the continuing line. You can also tune the notches to slightly different frequencies to get a broader attenuation band.

Cheers,
Tom

J M Noeding wrote:
>
> On Sat, 04 Mar 2000 02:52:26 GMT, "Al, N2NKB"
> <n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:
>
> >
> >
> >>>
> >>single quarterwave with RG213 may attenuate 30dB, twin filter possibly
> >>60dB, but need some impedance correction on 144MHz to minimise losses
> >>if you choose twin filter
> >>
> >>73 jan-martin
> >>LA8AK
> >
> >I think that jan-martin is recommending a stub, but I'm not sure. If you take a 1/4 wavelength long
> >piece of coax, and keep one end open circuit, the other end will appear to be a short circuit.
> >So you can simply "Tee" the stub into your antenna transmission line. However, the Q might be low enough to
> >degrade the wanted signal that is 26 MHz lower.

> >Al
> >
> >
> sorry, I believed you understood English over in America(???) ... in
> an international newsgroup... believe a quarterwave RG213 identical to
> 1/4 wavelength long piece of coax?
>
> Those of you who have some practical experience will be aware that
> some mismatch may appear on the frequency you wish to pass.
> So dependent on the application, this may be a problem, sometimes not,
> but usually one wish to avoid attenuation on 144MHz

2395. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D9114D.39651761@agilent.com>
Source record: 62189

Ed...what 'zactly do you want to accomplish? If you want to implement a differential amplifier, op amps can work fine at lower frequencies, but you might want to think about just using a simple discrete amplifier, or use a balanced video amplifier IC. -- If you really want to stick with op amps, you might have a look on the Analog Devices and Burr-Brown web sites (and perhaps others such as Linear Technology, Maxim, and maybe National). The jfet-input B-B OPA655, for example, will give you low distortion and about 6nV/rtHz noise. Its GBW product, at 240MHz, should give you enough gain to be useful to 30MHz, if you don't ask for a lot of closed-loop gain. But they are pricey. Balance in an op amp circuit should be determined mainly by circuit topology and layout symmetry. To turn an op amp into a closed-loop differential amp, you'll have to put some resistors around it, and you'll ruin the noise figure unless you use something like the three op amp instrumentation amplifier configuration. And that will get you up in the $50 range just for a set of OPA655's! (Is there a reason you really need jfet inputs?)

Cheers,
Tom

K3FDY wrote:
>
> Does anyone know of a low-noise, small-signal FET op. amp. type number that
> will work as a differential RF amp. up to 30 MHz? The 97 arrl handbook
> suggests a Harris
> HFA-1102, but I am told that Harris is out-of-business?
>
> Also, can slightly mis-matched components be tolerated or compensated for
> afterwards, if one were to homebrew an op. amp. out of discrete components?
>
> Tnx, Ed W. K3FDY

2396. Re: Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38D918E5.A6402F90@agilent.com>
Source record: 62190

I used double-sided foam tape once in a demo box (about 50 copies of it)
we made to show off one of our products. It held a small, light-weight
board. We found that they'd come loose after a while. I ended up
adding a screw to ones that came back with the board flopping around
inside. "YMMV" as they say. Another option in an Altoids tin is to
enclose the board in foam cut to the volume of the box and just close
the lid. Quick, simple shock mounting. Can handle a battery that way,
too.

Cheers,
Tom

garyc wrote:
>
> double sided adhesive foam tape works good too.
>
> * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> The fastest and easiest way to search and participate in Usenet - Free!

2397. Re: Help with standoffs in an altoids tin.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <38D91A23.2781E494@my-deja.com>
Source record: 62191

aa1pd@yahoo.com wrote:
>
> Hi all,
>
> I have just ordered a PK-3 keyer board and parts from morsex which I
> plan to build and mount in an altoids box. My question is about what
> would be the best way to keep the small pc board suspended above the
> bottom of the altoids tin. In a commercial kit they often use little
> sockets that you screw the board into but what do you savvy
> homebrewing types like to use as standoffs.
>
> Thanks please post the reply here so that others may benift!
>
> George
> AA1PD
>

In a word, "velcro".

In more than one word, you can get self adhesive velcro strips
at any hardware store. They are easy to cut with a pair of
scissors. Place a full size pad on the bottom of the box
and stick strips to the edges of the boards. The boards can
be easily removed without any tools and they will never
shake loose.

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

------------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

2398. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38d91852.2448537@news.eunet.yu>
Source record: 62192
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2399. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <JbjnA$AAAJ24Ew5r@jmwa.demon.co.uk>
Source record: 62193
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8b9eo1$t10$1@news.fsu.edu>, Jim Carr <jac@dirac.scri.fsu.edu>
inimitably wrote:
>Sorry, I forgot about the preposterously broad cross-post. This
> is such an FAQ that I typed that automatically.
>
> We always use 'p' to denote momentum, and in this case it is
> the familiar 3-vector momentum, albeit the relativistic one.

Thanks. Clearly something has happened to 'momentum' since I learned
about it long years ago, that I haven't seen explained anywhere. I
learned that momentum (for things like billiard balls) was mass times
velocity. That would make '(pc)^2' dimensionally inconsistent with mc^2,
as well as being zero for a photon!

I see from another post that the momentum of a photon is h/lambda, which
is hv/c (v = frequency). That is consistent with E = hv, I suppose,
because (pc)^2 = (hv)^2. I don't really see that introducing momentum is
helpful, unless maybe to explain why the Einstein and Planck energies
don't add arithmetically. Not that it matters anyway, of course, if the
Einstein energy is zero.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2400. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-22 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <3rFosGBbgJ24Ew8W@jmwa.demon.co.uk>
Source record: 62194
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<fn1gdso8anlckmihnealo9o66jj1hk84qn@4ax.com>, James Meyer
<notjimbob@earthlink.net> inimitably wrote:
>My good buddy Albert says that light *isn't* affected by gravity. He
>says that light always travels in a straight line. He says that it's space its
>self that gets bent by gravity. The light just takes the shortest path which is
>a straight line which only "looks" bent.

I really think that is semantics, or maybe philosophy. Every test we
could apply shows that the path is not straight, so what is the point of
maintaining that is 'is' in some abstract way. I don't think he did his
cause any good with such 'explanations'. Of course, in those days it was
not unusual to mix philosophical statements with scientific ones, and
the practice is not entirely dead even today.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2401. I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Mike Monett <mkmonett@hotmail.com>
Message-ID: <38D96213.4E12@hotmail.com>
Source record: 62106

To All,

I have broken Shannon's Information Theorem.

You can see the proof at

http://www.geocities.com/Athens/Atlantis/1798/index.htm

(disable Java to kill the popup ads)

or here

http://www3.sympatico.ca/add.automation/index.htm

I cannot participate in the newsgroup discussions. If anyone can find and confirm a flaw, please email me. But only if you have proven it to someone else.

I won't have time to discuss the issues this raises. Sorry.

This is now Public Domain everywhere except the US. Enjoy!

Best Regards,

Michael R. Monett
mailto:mkmonett@hotmail.com

2402. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38D9716E.24E09D76@hotmail.com>
Source record: 62107

How long do you intend to transmit into the dummy load? A week?
Two 20W resistors in parallel dissipate 40W continuous.
Putting them into oil, will increase the heat dissipation about double or more.
Oil is not critical, I use good ole ATF, works just fine, and can handle very high heat levels.

Nick Caruso wrote:

> I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
> at 20 W each. I was thinking of paralleling them and building a dummy load.
>
> My question: how much power can such a thing handle, continuously? I imagine
> it could tolerate 40 W intermittently, but how much should I derate it for
> continuous use? 50%? 70%?
>
> I'm considering doing the "Cantenna" thing and putting the resistors in oil
> inside a paint can. I have several questions on this topic! :-)
>
> 1) how much will this increase the continuous rating of the load?
>
> 2) where can I get transformer oil??? Will 10W40 do?
>
> 3) shouldn't the resistors really be mounted at the bottom of the can, so
> convection in
> the oil can help distribute the heat? Would this make enough difference to
> make the
> mechanical problems of mounting the RF connector to the side and sealing it
> worth
> the trouble?
>
> and finally,
>
> 4) do I immerse the resistors right in the oil, or is some sort of covering
> needed?
>
> thanks and best regards,
> nick
> kb1dej

2403. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <cyfC4.478$DY4.54810@typhoon1.gnilink.net>
Source record: 62108

Tom:
The small HF loops I make have a closely coupled pickup winding which serves as the output. The restriction on sig. pickup method is a matter of packaging and convenience, as opposed to maybe having the pickup winding located externally. The tight coupling works fine as long as the terminating Z into a receiver is relatively high, meaning a few K to 100 K. The higher the better, I have discovered. Working into the usual moderate to hi-z input of battery portables the coupling method works very good barefoot, but coupled into a 50 ohm, or even 500 ohm input, the Q and subsequent gain diminishes considerably. To overcome this, I have used a an unbalanced, two-stage FET/Bipolar amp.. This resolved the impedance match, but on line-operated equipment, I notice that noise rejection is not comparable with a battery portable at the very same location, plus with the hi z input (100 K), I notice a greater tendency to pickup spruious signals on line operated equipment (with my Kenwood 530S at least)? Assuming that the loop operates best when things are symmetrical, and in my case, with high Z output, it seemed logical to use then a differential amp. which offers both characteristics. Also, since the output cabling I use is a 32 inch, #30 guage, teflon twisted pair, the common-mode rejection feature of diff. amps. will work to negate stray pickup at this point also, I presume?

Retired, and as a hobby, I started to tail-gate similar loops at hamfests a couple years ago, explicitly for battery portables, but as they got somewhat popular, certain users would invariably try to use them on 50 ohms only to be disappointed, so now, it seems that I need to devise some better coupling method? Ferrite balun experiments didn't work across the whole spectra, apparently for wide impedance swings and extremely high Z preferred? As I have more time than test equipment, I merely do things by experiment. It also has been a while since I have been a bench technician.

Thanks for the input.
Ed W.

Tom Bruhns wrote in message <38D9114D.39651761@agilent.com>...
>Ed...what 'zactly do you want to accomplish? If you want to implement a
>differential amplifier, op amps can work fine at lower frequencies, but
>you might want to think about just using a simple discrete amplifier, or
>use a balanced video amplifier IC. -- If you really want to stick with
>op amps, you might have a look on the Analog Devices and Burr-Brown web
>sites (and perhaps others such as Linear Technology, Maxim, and maybe
>National). The jfet-input B-B OPA655, for example, will give you low
>distortion and about 6nV/rtHz noise. Its GBW product, at 240MHz, should
>give you enough gain to be useful to 30MHz, if you don't ask for a lot
>of closed-loop gain. But they are pricey. Balance in an op amp circuit
>should be determined mainly by circuit topology and layout symmetry. To

>turn an op amp into a closed-loop differential amp, you'll have to put
>some resistors around it, and you'll ruin the noise figure unless you
>use something like the three op amp instrumentation amplifier
>configuration. And that will get you up in the $50 range just for a set
>of OPA655's! (Is there a reason you really need jfet inputs?)
>
>Cheers,
>Tom
>
>K3FDY wrote:
>>
>> Does anyone know of a low-noise, small-signal FET op. amp. type number
that
>> will work as a differential RF amp. up to 30 MHz? The 97 arrl handbook
>> suggests a Harris
>> HFA-1102, but I am told that Harris is out-of-business?
>>
>> Also, can slightly mis-matched components be tolerated or compensated for
>> afterwards, if one were to homebrew an op. amp. out of discrete
components?
>>
>> Tnx, Ed W. K3FDY

2404. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: jac@dirac.scri.fsu.edu
Message-ID: <8bc1q2$rh8$1@news.fsu.edu>
Source record: 62109
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

... note followups to relativity newsgroup ...

} The light just takes the shortest path which is
} a straight line which only "looks" bent.

In article <3rFosGBbgJ24Ew8W@jmwa.demon.co.uk>
John Woodgate <jmw@jmwa.demon.co.uk> writes:
>
>I really think that is semantics, or maybe philosophy.

Not at all. The shortest distance between two points on the
surface of the earth is a Great Circle. Exactly the same
sort of thing. There is a good introduction to this in the
Relativity FAQ.

>Every test we
>could apply shows that the path is not straight, so what is the point of
>maintaining that is 'is' in some abstract way.

Because the experimental evidence suggests it is not abstract,
just as the evidence suggests that it is not an abstract idea that
the earth's surface is curved.

--
James A. Carr <jac@scri.fsu.edu> | "The half of knowledge is knowing
http://www.scri.fsu.edu/~jac/ | where to find knowledge" - Anon.
Supercomputer Computations Res. Inst. | Motto over the entrance to Dodd
Florida State, Tallahassee FL 32306 | Hall, former library at FSCW.

2405. Re: Clearspeech Speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <GzgC4.481$5X.51786@typhoon2.gnilink.net>
Source record: 62110

Bob:
As a cheap experiment (originally for CW), I took a 1-3/4 inch, 8 ohm,1 watt surplus speaker from All Electronics and mounted it at the center rib of a 1-1/2 inch sked 40 PVC coupling. Then I attached corresponding end caps, joined with stubs of 1-1/2 inch pipe. The overall length is about 4 inches. The speaker leads are brought out through the side of the coupler and plugged with poster putty. Prior to assembly, I stuffed the unit with fiber-glass insulation, using a circular piece of window screen to protect the speaker cone. On the forward, cone side, I drilled a tiny, 1/8 inch hole for the sound to exit. Hooked to a couple watts of audio, you will be surprised at how much sound will eminate through the small hole at the resonant frequency at about 600 Hz. As a single-pole filter, the response is not real sharp, but as for limiting noise and especially lightning crashes, it works quite well. Lightning crashes make but a smooth, puttering sound, not objectional at all. Additionally, I am playing around with internal baffling as with a folded horn, and more exit holes around the perimeter of the cap., which looks (sounds) promising as I am trying it on SSB with reasonable results. It is important to use at least a 1 watt speaker, as the system is highly damped and lossy, but the damping is a good feature. In general, keeping the speaker cone travel limited with a tight enclosure allows the speaker to be used considerably above its stated rating as voice coils especially overheat when they lose inductive reactance by exiting too far beyond their pole piece. So far, I haven't popped this speaker with some hard use. When the system is at resonance, one can feel a considerably amount of air being pumped through the small hole. This is one way to tell when it is at resonance. I have no idea whether All Electronics still has this speaker. The orig. cat. no. was SK-175, @ $1.25, slightly cheaper than the alternative you mention? Good luck. Ed W. K3FDY.

bobb wrote in message <38D78D77.7DD23A69@ulster.net>...
>Has anyone thied the "Clearspeech Speaker" by Am-Com of Lakeside,
>Montana? The QST Ad states that the speaker will filter 95% of of
>the background noise. I was just woundering if it is worth the $130
>price.
>
>Bob Bartel W2AWS
>

2406. Re: What is wrong with a crystal in my HW101

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Jim Ford <n6jf@mediaone.net>
Message-ID: <b6hC4.783$G5.7943@typhoon.we.rr.com>
Source record: 62111
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur

I have a possible cause. If the crystal is in a soldered small can what
often happens is solder flux from the solder that seals the crystal holder
can over time permeate to the crystal blank and make the activity of the
crystal poor also lowering the frequency somewhat because of the added mass.
Sometimes moving the crystal around or even changing the tweak capacitor
makes it OK for a while. I had the exact same problem you described with an
old FT301 one time. What I did which worked for me is to unsolder the base
of the holder and clean the crystal with solvent. After drying thoroughly I
resoldered the can back on and all was OK.

Good luck
Jim Ford, N6JF

"Curtis Scholl" <cscholl@izzy.net> wrote in message
news:mTOB4.3042$D7.75965@news.itd.umich.edu...
> Hello all:
>
> My Heathkit HW-101 transceiver is having some trouble on the 28.000 to
> 28.500 band. I suspect the crystal or the crystal holder. The received
band
> is intermittent. I once took the crystal out and looked at the holder. It
> seems as if the last owner "wallowed out" the insert where the crystal leg
> goes. I tried to fill in the gap by using AL foil on the leg and inserting
> it into the holder. It worked for a short time then nothing again.
>
> Any suggestions?
>
> Curtis Scholl
> cscholl@izzy.net.
>
>
>
>

2407. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <38D9FC67.B2AF888@oio.net>
Source record: 62112

Nick,
Power ratings are additive when resisters are in parallel. If you
wire 5 20 watt resistors in parallel, you have a total power disipation
of 100 watts. If possible, you wanna build in about a 50% safety
factor,
so a total of 150 watts for a 100 watt dummy load.
If your thinking of the 'cantenna' type dummy load, do NOT use motor
oil! Motor is flammable. Use mineral oil instead. In the same vain,
do NOT use a glass container! The reason for that isn't too hard to
figure out. Also, besure to put a presure relief hole in the lid of
the can. And yes, submerge the resistors in the oil.
'Doc

2408. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38D9F288.4EDD21A5@cmcorp.com>
Source record: 62113

Nick Caruso wrote:

> I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
> at 20 W each. I was thinking of paralleling them and building a dummy load.

I'll bet they are not non-inductive at RF!
I've seen metal body wire wound resistors used in magnetic deflection circuits
marked non-inductive! (but they are NOT good at RF.)
You want a stick of resistance material or thick film on a ceramic form.

>
>
> My question: how much power can such a thing handle, continuously? I imagine
> it could tolerate 40 W intermittently, but how much should I derate it for
> continuous use? 50%? 70%?
>
> I'm considering doing the "Cantenna" thing and putting the resistors in oil
> inside a paint can. I have several questions on this topic! :-)
>
> 1) how much will this increase the continuous rating of the load?

I'd not expect more than a 50% increase.

>
>
> 2) where can I get transformer oil??? Will 10W40 do?

I'd avoid flammable oils.

>
>
> 3) shouldn't the resistors really be mounted at the bottom of the can, so
> convection in
> the oil can help distribute the heat? Would this make enough difference to
> make the
> mechanical problems of mounting the RF connector to the side and sealing it
> worth
> the trouble?

Then you have a hot spot on the bottom where heat radiation is poor!

>
>
> and finally,
>
> 4) do I immerse the resistors right in the oil, or is some sort of covering
> needed?

>

Most oils are RF non conductors so yes, the oil goes right on the resistors.

>
> thanks and best regards,
> nick
> kb1dej

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

2409. Re: Clearspeech Speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <38D9FFEF.4119533B@oio.net>
Source record: 62114

bobb wrote:
>
> Has anyone thied the "Clearspeech Speaker" by Am-Com of Lakeside,
> Montana? The QST Ad states that the speaker will filter 95% of of
> the background noise. I was just woundering if it is worth the $130
> price.
>
> Bob Bartel W2AWS
++++++++++++++++++++++++++++++++++
Bob,
Don't believe eberything you read.
'Doc

2410. Re: Satellite Cable Length

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: ma_locksmith <ma_locksmith@email.msn.com>
Message-ID: <eQFR66MI$GA.206@cpmsnbbsa03>
Source record: 62115

From a purely technical standpoint, the loss in a cable is directly proportional to it's length. Therefore, the shortest length (in a matched system) provides the lowest loss. However, the system itself may be able to withstand many times the loss you get from a longer cable and you would never notice it in reception.

Ed
"Badboy2" <drbadboy@hotmail.com> wrote in message
news:MPG.13433598a7ce8856989683@news.sofnet.com...
> """"Please forgive me if this is the wrong place to post""
>
> This may be a stupid question but I would like to know if the RG-6u coax
> length would make any difference in the signal strength of the DSS
> SATELLITE and HUGHES DIRECPC SATELLITE if so does anyone know how each
> should be configured so I might get a stronger signal Please e-mail me.
> Thanks in Advance

2411. Mike Monett <mkmonett@hotmail.com>

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000323085555.00b99e40@pop.uky.edu>
Source record: 62116

Does your system require noise to work?
The more noise the better the resolution?

73
Bill wa4lav

At 04:30 AM 3/23/00 -0800, you wrote:
>Date: Thu, 23 Mar 2000 00:15:21 GMT
>From: Mike Monett <mkmonett@hotmail.com>
>Subject: I Have Broken Shannon's Theorem
>
>To All,
>
> I have broken Shannon's Information Theorem.
>
> You can see the proof at
>
> http://www.geocities.com/Athens/Atlantis/1798/index.htm

2412. Homebrew for the disabled, elderly...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: kc8bcr <kc8bcr@hotmail.com>
Message-ID: <Y1qC4.4125$A4.217298@c01read04.service.talkway.com>
Source record: 62117

We started our business over eleven years ago by building homebrew
style projects for the disabled and elderly who weren't able to "roll
their own". Since then, many people purchase our products just because
they're inexpensive and fun. The "Peanut Whistle Two" 40 meter QRP
transmitter and "The Pill Bottle Antenna Tuner" are just a couple of
examples of our products. To see photos and descriptions, please visit:

http://qth.com/dwm

73, Bill
WA8MEA
--
Free audio & video emails, greeting cards and forums
Talkway - http://www.talkway.com - Talk more ways (sm)

2413. I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000323095114.009e7c00@pop.uky.edu>
Source record: 62118

OOPs put the address in the Subject line!!!

> Does your system require noise to work?
>The more noise the better the resolution?
>
>73
>Bill wa4lav
>
>
>At 04:30 AM 3/23/00 -0800, you wrote:
>>Date: Thu, 23 Mar 2000 00:15:21 GMT
>>From: Mike Monett <mkmonett@hotmail.com>
>>Subject: I Have Broken Shannon's Theorem
>>
>>To All,
>>
>> I have broken Shannon's Information Theorem.
>>
>> You can see the proof at
>>
>> http://www.geocities.com/Athens/Atlantis/1798/index.htm

2414. Hamfest March 26, Pickaway County Ohio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Charles Knaack <protect@bright.net>
Message-ID: <XxqC4.2011$C23.20710@cletus.bright.net>
Source record: 62119

Sunday March 26, 2000

Amateur Radio Equipment - Test Gear - Computers Software Parts and MORE!
Food available for sale at the Hamfest.

Pickaway County Fairgrounds Coliseum TALK IN FREQUENCY 147.18+
State Route 22 East/Lnacaster Pike
Circleville. OHIO
Tickets $5.00 at the door, tables $12.00 with one ticket included with each
table purchase.
Setup is at 6:00 AM -- Doors open to the Public at 8:00 AM

For more info Contact:
Phil Cuellar 740-983-2735 KB8TRK@ARRL.NET or
Scott Hixon 740-474-5293 SCNN4@Hotmail.comm

2415. Re: Clearspeech Speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <8bddme$r0g$1@vax.area.com>
Source record: 62120

In article <38D9FFEF.4119533B@oio.net>, W5LZ <w5lz@oio.net> wrote:
>
>bobb wrote:
>>
>> Has anyone thied the "Clearspeech Speaker" by Am-Com of Lakeside,
>> Montana? The QST Ad states that the speaker will filter 95% of of
>> the background noise. I was just woundering if it is worth the $130
>> price.
>>
>> Bob Bartel W2AWS

I've tried it and IMHO it works quite well. I would describe the S/N improvement as 6 to 10 dB (subjectively) which is not quite 95% but getting there. It greatly reduces listening fatigue by getting rid of white noise, and it doesn't cause much distortion of the original signal (voice or CW).

One important limitation: it will *not* pull an uncopyable signal out of the noise. It will just make a marginal signal easier to listen to. So it is probably more useful for the ragchewer than the DX or contester.

It also works great for nulling heterodynes automatically. It is *much* better than the notch filter on my FT1000 for this.

I have not used any competitive DSP boxes, but others who have say this is the best.

Rick Karlquist N6RK

2416. Radio Shack 10 Meter Givaway!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Charles Knaack <protect@bright.net>
Message-ID: <FDqC4.2013$C23.20827@cletus.bright.net>
Source record: 62121

Sunday March 26, 2000

Amateur Radio Equipment - Test Gear - Computers Software Parts and MORE!
Food available for sale at the Hamfest.

Grand Prize of a new Radio Shack 10 Meter Mobile Xciever - need not be
present for drawing to win!

Pickaway County Fairgrounds Coliseum TALK IN FREQUENCY 147.18+
State Route 22 East/Lnacaster Pike
Circleville. OHIO
Tickets $5.00 at the door, tables $12.00 with one ticket included with each
table purchase.
Setup is at 6:00 AM -- Doors open to the Public at 8:00 AM

For more info Contact:
Phil Cuellar 740-983-2735 KB8TRK@ARRL.NET or
Scott Hixon 740-474-5293 SCNN4@Hotmail.comm

2417. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38da4837.6512092@news.eunet.yu>
Source record: 62122
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2418. "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: " A. Scott Chesnick" <chesnics@zeus.nhlbi.nih.gov>
Message-ID: <38DA4B85.B70BC22D@zeus.nhlbi.nih.gov>
Source record: 62123
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Hello all,
I found this in the Washington Post yesterday.

This seems to fit in well with the rants and raves of the recent thread
and violating the regular laws of physics in the least time.

Does anyone know anything else about this?
Regarde' Scott

A. S. Chesnick
Engineer
In Vivo Center for Nuclear Magnetic Resonance Imaging
National Institutes of Health
Bethesda, Md. 20892

MINNEAPOLIS, March 21ï¿½Two California physicists
announced today that they had created a new class of
materials, never before seen in nature, with highly unusual
properties that may have applications in fields such as wireless
communication.

The materials, described as "left-handed," reverse the normal
way that microwave energy--including such standard natural
phenomena as the Doppler Effect--behaves, the researchers
said.

"This is Alice in Wonderland. The effects get curiouser and
curiouser as we go through them," said Sheldon Schultz, who
with his colleague David R. Smith, both of the University of
California at San Diego, spoke to reporters here at a national
meeting of the American Physical Society.

The researchers displayed a sample of the new
"meta-material," and it appeared to be something that any
tinkerer might hammer together in a basement. The scientists
mounted studs of copper wire on a metal plate and interlaced
them with thin strips of copper rings, everything held snug
with strips of Styrofoam. The sample could easily be held in
one hand. The innovation is not in the raw materials, but in
their arrangement. When microwaves are beamed through the
material they become focused rather than diverging, as they
normally would, the researchers said.

It is the combination of the specially designed copper rings
arranged against the copper wires that gives the material the
property of reversing the normal response to energy, the

researchers said.

"If these effects turn out to be possible at optical frequencies, this material would have the crazy property that a flashlight shining on a slab can focus the light at a point on the other side. There's no way you can do that with just a sheet of ordinary material," Schultz said.

Three physicists with no connection to the research who attended the presentation agreed that it was an exciting development. The materials obey all the normal laws of physics, they said.

"It's not backwards in time. It's not making you younger. It's not science fiction. It's not spooky," Schultz said. "It opens up a class of materials that just have not been available."

Their paper describing the advance--"A Composite Medium with Simultaneously Negative Permeability and Permittivity"--will be published soon in the journal Physical Review Letters.

The paper written by the scientists was initially rejected without review by Physical Review Letters. The scientists blamed their inability to explain the significance of the work. Then Smith, combing through scientific papers on "negative permeability," came across an obscure paper from 1968 written by a Russian theorist, V.G. Veselago. Veselago predicted that a material with electric and magnetic response to electromagnetic radiation that is the opposite to the norm, if such a thing were ever found or invented, would reverse the manner in which the energy traveled through it. "We didn't understand there was anything special about it until I found that paper," Smith said.

From Veselago, Smith picked up the term "left-handed." Smith and Schultz and three colleagues at UCSD then elaborated on their description of their work in the original paper and this time got it reviewed and approved by three anonymous experts.

Smith said he found out only early this week that Veselago is still alive. "He said in some sense he had written it off as a joke, because he didn't think it would ever be realized," Smith said.

Schultz, 67, said it was the most important development in his 39-year career. Smith, 35, said his team filed for a patent only this past Friday. The research is clearly competitive: The scientists acknowledged a debt to a British physicist, John Pendry of Imperial College, London, who in 1996 had described a way to use ordinary copper wires to create a material with certain left-handed qualities. The California

scientists said they believed Pendry is also seeking patent rights for materials he has produced.

The scientists were quick to acknowledge that the research is in the early stages and that they don't yet know what may come of the discovery. Since they have shown that the materials have a dramatic effect on microwave propagation, they assume it might be used in the wireless communication industry--for example, in the construction of antennas.

"Don't ask me to predict the next whiz-bang left-handed materials company," Schultz said.

2419. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8bdilh$3jm$1@campus3.mtu.edu>
Source record: 62124
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In rec.radio.amateur.homebrew Science Hobbyist <bbeaty@microscan.com> wrote:
> I claim that by adding a tuned circuit to a short
> dipole antenna, I can make a load resistor dissipate
> more energy than if the tuned circuit was not present.

--> Isn't this basic antenna matching theory? I mean, correct me if I'm wrong, but haven't people been doing basically this with "antenna tuners" for, oh, around 70 years or more now? I don't see what's new about it.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Eventually, the world will stop turning due to friction from red tape."
-- Marcus D. Watts

2420. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38DA53AE.3155D893@mmm.com>
Source record: 62125
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

" A. Scott Chesnick" wrote:

> "If these effects turn out to be possible at optical frequencies,
> this material would have the crazy property that a flashlight
> shining on a slab can focus the light at a point on the other
> side. There's no way you can do that with just a sheet of
> ordinary material," Schultz said.

Sounds like a zone plate. It would need monochromatic
(more or less) light.

Opinions expressed herein are my own and may not represent those of my employer.

2421. High voltage feedthrough caps needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: artky1k@ctel.net
Message-ID: <38da5cdf.3021578@news.northlandlink.com>
Source record: 62126

Hi Everyone,

I need 10 to 15 high voltage feedthrough caps, 1000 to 5000 pf @ 2 kv
or higher. Prefer stud mount and premium grade units if possible.

Drop em a line via email if you have escess stock.

Regards,

Art

2422. Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38da6034.261748032@news.online.no>
Source record: 62127

Many unknown cores are in the junkbox, here is a way to decide which is useful, at least for 80m. Similar procedure can be tried for other cores, the FB43-2401 might not be too 'unknown' but describes how to sort out a problem

Quote LA7MI: Reactance for the lowest frequency band in use shal be 4 times higher than the actual impedance. For a 50 ohm winding the reactance should be 200 ohm, ie. 9-10uH on 80m. With some cores like Amidon FB43-2401 (u=800-2000) one must use higher reactance, might be better to use a core with lower permitivity. But the cores were bought at low price at a flea marked in USA, so I would make some tests to see how to use them. One may test by winding one turn on a toroid core and connect to the signal generator with - say 1V RF output voltage. Let the generator stay connected for 15-20 minutes and check if the core has been warm. If it just feel somewhat warm this is within the acceptable limit of use. Output voltage for a solid state power amplifier with 12V supply is 8-9V. With Amidon FB43-2401 it is better to stack 3 cores in parallell with 3 turns instead for using one core with 9 turns winding.

A power generator is used, if you wish to see the circuit please send me an email.
Figure 32-1 shows LA7MI power signal generator with RF power output 0-1.5W @3.7MHz

73 jan-martin
LA8AK

2423. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <38DA6EA5.A2EAB57@software.com>
Source record: 62128

"Thomas C. Sefranek" wrote:

> Nick Caruso wrote:
>
> > I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
> > at 20 W each. I was thinking of paralleling them and building a dummy load.
>
> I'll bet they are not non-inductive at RF!

Well, a guy was selling them at the MIT Flea as "non-inductive -- suitable for making dummy loads". I dunno what's inside, but they're encased in heavy metal bodies with heat sinks on them.

Now, I'm a trusting person, but I *was* planning on sweeping the load with an MFJ-249 antenna analyzer to see what the SWR looked like before I actually transmit into the thing... Maybe I'll do a quick and dirty test by soldering one of them to an SO-239 and sweeping that.

Would this be a sufficient check?

thanks and best regards,
ncc
kb1dej

2424. Antennas & Transmission Lines.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bds1n$q5l$1@uranium.btinternet.com>
Source record: 62129

The following is an extract from a reply in another newsgroup. It may be of interest here.

Antenna conductors behave as transmission lines. Example - a horizontal end fed wire is a single-wire line above a ground plane. A horozontal dipole is two single-wire lines. A vertical is also a single conductor line above a ground plane.

All transmission lines have a characteristic impedance Zo = Ro + jXo which depends on dimensions such as length, diameter and height above ground. All lines also have attenuation (dB per metre) and propagation velocity (phase shift, radians per metre). With antennas the radiation resistance is a principal cause of attenuation and can be lumped together with conductor resistance.

The input (feedpoint) impedance, Rin + jXin, of any transmission line can be calculated from frequency, its length and terminating impedance. For example the terminating impedance of a vertical antenna or a random long wire is an open circuit. The terminating impedance of a full-wave loop is a short circuit.

The process can be reversed. The terminating impedance, it may be an antenna, can be computed from measured input impedance of the antenna's feedline. Useful if you are unable to take the impedance bridge up to the centre of your dipole. Use program ZL_ZIN.

Most of the programs available from my website involve input impedances of transmission lines for various terminations. For example, the first length of line of a loaded dipole is terminated with a loading coil followed by a second length of open-circuited line. A Beverage antenna is terminated in its own Zo. A magloop is terminated with its tuning capacitor. Amongst other things RJELINE3 solves the same problems as a Smith Chart, faster and more accurately.

For examples of practical use of calculations download programs from my website below. Each downloads in a few seconds. Not zipped up. Run imediately. User friendly.
--
==========
Regards from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========

2425. Re: Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bdunu$321$1@plutonium.btinternet.com>
Source record: 62130

Use program TOROID to calculate permeability of core material from
dimensions, number of turns and measured inductance.

==========
Regards from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========

2426. Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Mike Monett <mkmonett@hotmail.com>
Message-ID: <38DA83BE.22BF@hotmail.com>
Source record: 62131

Mike Monett wrote:
>
> To All,
>
> I have broken Shannon's Information Theorem.
>
> You can see the proof at
>
> http://www.geocities.com/Athens/Atlantis/1798/index.htm
>
> (disable Java to kill the popup ads)
>
> or here
>
> http://www3.sympatico.ca/add.automation/index.htm
>
> I cannot participate in the newsgroup discussions. If anyone can
> find and confirm a flaw, please email me. But only if you have
> proven it to someone else.
>
> I won't have time to discuss the issues this raises. Sorry.

Nemo pointed out on s.e.d how insulting this was to all of you. I apologize most humbly and sincerely. I was thinking of the time it will take to get the source in shape to post as I promised. Nail me if I do that again.

I would be honored if people took the time to look at this concept. I would love to take part in discussions on this approach. There is a good chance they can degerate into serious misunderstandings, especially when noise is the main topic. We need to guard against that possibility. There is a lot I do not know about this concept. I do not know what the limits are. I do not know what the dynamic range will be. It has many unknowns. This can lead to misunderstands. Please try to be patient and a bit tolerant. Maybe we will all gain something.

I would be especially interested in the results obtained by anyone who tries it. My lab equipment is limited, and right now the main focus is on the simulation software. You guys have a much broader range of interests and frequency range.

> This is now Public Domain everywhere except the US. Enjoy!

Best Regards,

Michael R. Monett
mailto:mkmonett@hotmail.com

2427. Re: Mike Monett <mkmonett@hotmail.com>

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Mike Monett <mkmonett@hotmail.com>
Message-ID: <38DA8437.BF4@hotmail.com>
Source record: 62132

William Fuqua wrote:
>
> Does your system require noise to work?
> The more noise the better the resolution?
>
> 73
> Bill wa4lav

Don't we wish! No, it works fine with positive SNR.

Best Regards,

Michael R. Monett
mailto:mkmonett@hotmail.com

2428. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <KIvC4.958$ED.25035@news2-win.server.ntlworld.com>
Source record: 62133
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

A. Scott Chesnick <chesnics@zeus.nhlbi.nih.gov> wrote in message
news:38DA4B85.B70BC22D@zeus.nhlbi.nih.gov...
> Hello all,
> I found this in the Washington Post yesterday.
>
> This seems to fit in well with the rants and raves of the recent thread
> and violating the regular laws of physics in the least time.
>
>
> Does anyone know anything else about this?
> Regarde' Scott
>

Sounds like a relative of the photonic crystal.

Dirk

> A. S. Chesnick
> Engineer
> In Vivo Center for Nuclear Magnetic Resonance Imaging
> National Institutes of Health
> Bethesda, Md. 20892
>
>
> MINNEAPOLIS, March 21-Two California physicists
> announced today that they had created a new class of
> materials, never before seen in nature, with highly unusual
> properties that may have applications in fields such as
wireless
> communication.
>
> The materials, described as "left-handed," reverse the normal
> way that microwave energy--including such standard natural
> phenomena as the Doppler Effect--behaves, the researchers
> said.
>
> "This is Alice in Wonderland. The effects get curiouser and
> curiouser as we go through them," said Sheldon Schultz, who
> with his colleague David R. Smith, both of the University of
> California at San Diego, spoke to reporters here at a
national
> meeting of the American Physical Society.
>
> The researchers displayed a sample of the new

> "meta-material," and it appeared to be something that any
> tinkerer might hammer together in a basement. The scientists
> mounted studs of copper wire on a metal plate and interlaced
> them with thin strips of copper rings, everything held snug
> with strips of Styrofoam. The sample could easily be held in
> one hand. The innovation is not in the raw materials, but in
> their arrangement. When microwaves are beamed through the
> material they become focused rather than diverging, as they
> normally would, the researchers said.
>
> It is the combination of the specially designed copper rings
> arranged against the copper wires that gives the material the
> property of reversing the normal response to energy, the
> researchers said.
>
> "If these effects turn out to be possible at optical
frequencies,
> this material would have the crazy property that a flashlight
> shining on a slab can focus the light at a point on the other
> side. There's no way you can do that with just a sheet of
> ordinary material," Schultz said.
>
> Three physicists with no connection to the research who
> attended the presentation agreed that it was an exciting
> development. The materials obey all the normal laws of
> physics, they said.
>
> "It's not backwards in time. It's not making you younger.
It's
> not science fiction. It's not spooky," Schultz said. "It
opens up
> a class of materials that just have not been available."
>
> Their paper describing the advance--"A Composite Medium
> with Simultaneously Negative Permeability and
> Permittivity"--will be published soon in the journal Physical
> Review Letters.
>
> The paper written by the scientists was initially rejected
> without review by Physical Review Letters. The scientists
> blamed their inability to explain the significance of the
work.
> Then Smith, combing through scientific papers on "negative
> permeability," came across an obscure paper from 1968
> written by a Russian theorist, V.G. Veselago. Veselago
> predicted that a material with electric and magnetic response
> to electromagnetic radiation that is the opposite to the
norm, if
> such a thing were ever found or invented, would reverse the
> manner in which the energy traveled through it. "We didn't

> understand there was anything special about it until I found
> that paper," Smith said.
>
> From Veselago, Smith picked up the term "left-handed."
> Smith and Schultz and three colleagues at UCSD then
> elaborated on their description of their work in the original
> paper and this time got it reviewed and approved by three
> anonymous experts.
>
> Smith said he found out only early this week that Veselago is
> still alive. "He said in some sense he had written it off as
a
> joke, because he didn't think it would ever be realized,"
Smith
> said.
>
> Schultz, 67, said it was the most important development in
his
> 39-year career. Smith, 35, said his team filed for a patent
only
> this past Friday. The research is clearly competitive: The
> scientists acknowledged a debt to a British physicist, John
> Pendry of Imperial College, London, who in 1996 had
> described a way to use ordinary copper wires to create a
> material with certain left-handed qualities. The California
> scientists said they believed Pendry is also seeking patent
> rights for materials he has produced.
>
> The scientists were quick to acknowledge that the research is
> in the early stages and that they don't yet know what may
> come of the discovery. Since they have shown that the
> materials have a dramatic effect on microwave propagation,
> they assume it might be used in the wireless communication
> industry--for example, in the construction of antennas.
>
> "Don't ask me to predict the next whiz-bang left-handed
> materials company," Schultz said.
>
>

2429. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8be2jf$1gee$1@ausnews.austin.ibm.com>
Source record: 62134

In <38DA6EA5.A2EAB57@software.com>, Nick Caruso <nick.caruso@software.com> writes:
>"Thomas C. Sefranek" wrote:
>
>> Nick Caruso wrote:
>>
>> > I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
>> > at 20 W each. I was thinking of paralleling them and building a dummy load.
>>
>> I'll bet they are not non-inductive at RF!
>
>Well, a guy was selling them at the MIT Flea as "non-inductive -- suitable for making
>dummy loads". I dunno what's inside, but they're encased in heavy metal bodies with
>heat sinks on them.
>
>Now, I'm a trusting person, but I *was* planning on sweeping the load with an MFJ-249
>antenna analyzer to see what the SWR looked like before I actually transmit into the
>thing... Maybe I'll do a quick and dirty test by soldering one of them to an SO-239
>and sweeping that.
>
>Would this be a sufficient check?
>
>
> thanks and best regards,
> ncc
> kb1dej
>
>

That should be sufficient for HF. I wouldn't trust it for VHF or
above since the lead inductance could become a factor.

What brand are the resistors? Are they sort of a golden brown
anodized aluminum case with leads with eye-holes on each end? Do
they have mounting brackets, one on each opposing end to screw them
down? (I'm trying to describe these as best as I can.)

I tried making a dummy load from these once before, and it worked
fairly well (but not perfectly) on the bottom end of the HF
spectrum, but it was pretty awful on the upper end, and was just
plain useless on VHF. I'm not sure if it was because they were
(non-inductively) wire wound, or if it was the metal case that was
causing excessive capacity.

But, give it a try and see what happens. If it doesn't work, well,
you can always make a foot warmer out of them for winter. :-)

As for construction techniques that you'd asked about earlier, remember that oil is messy. I'd recommend not drilling a hole in the side of the can due to concerns about leakage. One construction technique I've seen is to use a paint can, and attach the connector on the top, and suspend the resistors about half way down in the can. Of course, the tricky part is making sure that the leads leading from the connector to the resistors act as a proper transmission line. You can obtain formulas to determine conductor spacing and size to treat them as a parallel conductor transmission line (Don't forget to include the permittivity of the oil in the capacitance calculations.).

Of course, as long as the leads are less than about a tenth of a wavelength, you probably don't need to worry too much (e.g., the leads probably won't be a problem for HF, but they would be a concern for UHF).

I've seen some designs that have incorporated a sleeve around the resistors to improve the thermal siphoning and circulation of the oil. An added advantage might be that the sleeve would act as an RF shield to limit the RF field (and it might make the transmission line analysis of the wires to the resistor easier to calculate, especially if the sleeve was used as the outer conductor of a coaxial style transmission line).

As a previous poster has mentioned, be sure to think about a vent hole (It's no fun to have the can build up pressure and relieve it by splitting a seam.). You probably also want to leave a slight air gap between the top of the oil and the top of the can to act as a expansion buffer.

The selection of oil can be a bit tricky. Transformer oil is usually recommended, but you have to be a little careful about it. Obtaining small quantities is not real easy, although some people have said that they can bum some off of the local utility company. In any case, make sure that the oil you obtain is not contaminated with PCBs (carcinogenic). This shouldn't be too much of a concern now, but if you stumble across a quantity of old oil, just beware of it.

Note that almost all oils are flamable, including mineral oil (Mineral oil is just a petroleum oil, as opposed to a vegtable oil, both of which are flamable). I've heard some people use cooking oil, but I can't necessarily recommend that. One of the concerns is to make sure the oil does not oxidize or become rancid (You don't want to take the top off a year or two in the future and find either tar or a slimy smelly mess.). Thus, you may need to add an anti-fungal, anti-oxidization agent which has to be non-conductive.

One of the other things you may think of is including a RF voltage monitoring tap to give you an idea of the power. Or, for the really complex version, you could mount a couple of thermistors on the can and measure the temperature rise to find the power being dissipated.

Some of the other construction techniques I've seen involve paralleling a quantity of Carbon composition resistors. For example, paralleling 20 2-Watt 1K-Ohm Carbon composition resistors will result in a 50 Ohm, 40 Watt dummy load (Well, you have to be a little careful about the tolerance of the resistors to make sure the power balances out.). And, by immersing them in oil, and limiting the duty cycle, you can push it quite a bit higher than 40 Watts.

Good luck with it. It sounds like a fun project (But, I bet you never thought something as simple as a dummy load could be so complex.). :*)

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2430. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <8UzaD3BCnm24Ewvb@jmwa.demon.co.uk>
Source record: 62135
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

<38DA4B85.B70BC22D@zeus.nhlbi.nih.gov>, A. Scott Chesnick
<chesnics@zeus.nhlbi.nih.gov> inimitably wrote:
>Hello all,
>I found this in the Washington Post yesterday.
>
>This seems to fit in well with the rants and raves of the recent thread
>and violating the regular laws of physics in the least time.
>
>
>Does anyone know anything else about this?

There is a similar report in the British 'New Scientist' No 2231 dated
22 March 2000.

I would hope to see a material in which the permeability and
permittivity are of opposite sign, because the speed of light in such a
material would be imaginary.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2431. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38DA9E8D.857FCA30@eznec.com>
Source record: 62136
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

John Woodgate wrote:
> . . .
> I would hope to see a material in which the permeability and
> permittivity are of opposite sign, because the speed of light in such a
> material would be imaginary.

The speed of light is the reciprocal of the square root of the product of the permeability and permittivity. So if both are negative, the speed of light is real.

Roy Lewallen, W7EL

2432. Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Mike Monett <mkmonett@hotmail.com>
Message-ID: <38DA9FCD.72DC@hotmail.com>
Source record: 62137

Mike Monett wrote:

I'm getting reports from other newsgroups of problems finding the links
to the design details and examples. I made the link bigger on the page.
If you missed it, please try again.

Best Regards,

Michael R. Monett
mailto:mkmonett@hotmail.com

2433. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38da8819.271962241@news.online.no>
Source record: 62138

On 22 Mar 2000 23:10:58 -0800, davem@cs.ubc.ca (Dave Martindale)
wrote:

>Nick Caruso <nick.caruso@software.com> writes:
>>I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
>>at 20 W each. I was thinking of paralleling them and building a dummy load.
>
>You should investigate what the "noninductive" label actually means.
>In some cases at least, such resistors are actually resistance wire
>wound as a coil on an insulating rod. The noninductive versions
>use a bifilar winding, so half the turns are carrying current in
>one direction and the other half carry it in the other direction.
>In theory, the magnetic fields cancel and you get a noninductive
>resistor. But there's probably some residual inductance - not enough
>to be troublesome at audio frequencies, but possibly a problem for RF.
>
> Dave
believed those bifilar wound resistors dissappeared long time ago, we
had them in telephone old exchanges, but haven't seen such elsewhere

73
jan-martin
LA8AK

2434. Re: Wanted: Nixie Tube Burroughs B5870

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: cj <cj_johansson@hp.com>
Message-ID: <38DAA5D4.7A9A@hp.com>
Source record: 62139
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

James C. Garland wrote:
>
> Anybody got one or two of these? I"m gettin' desperate!
>
> 73,
>
> Jim W8ZR

Well, I've got 8 Burroughs B-5870ST Nixie tubes, but they're in an
old HP freq. counter I'm kinda trying to ressurect (I'm a bit of a nut
when it comes to old, ancient test equipment, especially Nixie's).

I suppose I could be persuaded though. Let me know what they're worth
to you...

-cj
KD6AEG

|cj@boi.hp.com | KD6AEG |
|===|
Hewlett-Packard	Give a man a beer
Enterprise Storage Solutions Div.	and he'll waste an hour
11413 Chinden Blvd. M/S 831	Teach him to brew
Boise, ID 83714	and he'll waste the rest of his life.

2435. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38DAD4EB.B485323C@eznec.com>
Source record: 62140
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Rob Barris wrote:
>
> In article <38DA9E8D.857FCA30@eznec.com>, Roy Lewallen <w7el@eznec.com> wrote:
>
> > John Woodgate wrote:
> > > . . .
> > > I would hope to see a material in which the permeability and
> > > permittivity are of opposite sign, because the speed of light in such a
> > > material would be imaginary.
> >
> > The speed of light is the reciprocal of the square root of the product
> > of the permeability and permittivity. So if both are negative, the speed
> > of light is real.
>
> Well he *did* say "of *opposite* sign"...
>
> Rob

Right you are. In my hasty reading, I interpreted it as "opposite to
normal", while he surely meant the more literal meaning "opposite to
each other". Sorry.

Roy Lewallen, W7EL

2436. FS: RF components (long) for builders

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-23 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38DAE75E.ECA7D64B@valley.net>
Source record: 62141

Hello-- Revised -03/23/2000

I'm offering homebrew builders the following NOS (new old stock) RF components, including...
***
Hewlett-Packard MSA-0786 MMICs ($1.00 each, $5.00 for 6, $10.00 for 15, or $25.00 for 50 pieces); DC-2 GHz. These are taped and reeled and have leads configured for surface-mounted applications.

Specs are available at HP's web site (or with your order)...

http://www.hp.com/HP-COMP/index.html
***
1N5711 Schottky diodes, full-length leads, taped and reeled, $1.00 for 10
pieces
***
1N5821 Schottky rectifiers, full-length leads, bulk packed, $1.00 for 8 pieces
***
PIN diodes, no other specs available; full-length axial-leaded packages;

individually serialized in sealed-foil envelopes. $1.00 each.
***
JAN 1N748A Zener diodes: individually sealed in mil-spec foil packets for your protection<g> in 1983.
$1.00 for 6 pieces.
***
SD-201 Signetics DC-2 GHz DMOS single-gate FETs four-lead TO-72 can (like TO-18 w/shield lead). A conductive-rubber antistatic "O" ring encircles
all four leads. Specs (available on request and with purchase) include S parameter plots. $1.00 each, $3.00 for 6, $5.00 for 12 pieces.
***
TN-2219A National Semiconductor NPN general-purpose NPN transistor: 100 < hFE < 300 at Ic= 150 mA; BVcbo = 75 V min.; BVceo = 40 V min.; Icbo = 10 nA max. at Vcb= 60 V; Cob = 8 pf max.; Ft = 60 MHz min. at Ic = 20 mA. NF 4 dB (max.)

In TO-237 metal-tabbed plastic package (similar to TO-92); this package reduces thermal resistance from 125 C per watt for a TO-92 to 50 C per watt
for the TO-237. Good for building a "desert island" QRP rig around a single
device type!

$1.00 for 20 pieces; $5.00 for 120 pieces

***
Minicircuits T1-1T (1:1 turns ratio (center-tapped)) broadband RF transformers (80 KHz to 200
MHz); leads are formed for surface mounting but you can rebend for DIP insertion. Visit
www.minicircuits.com for full specs via their catalog.

$2.00 for 3 pieces
***
Minicircuits PSCQ-2-400 90-degree, 2-way power divider, 0.9 dB insertion

loss, 225-400 MHz; $1.00 each
***
Fair-Rite cores (both type 43 mix):

2643023002 (a long-cored toroid) $1.00 for 10 pieces
2843002402 (binocular (balun) core) $1.00 for 20 pieces
***
Coilcraft p/n 142-07J08 single-winding adjustable inductors.
330 nH min./ 378 nH nom. /427 nH max.; 307 nH with tuning slug removed. Q is 112 min. at 40 MHz; 7.5 turn winding on 10 mm molded form.

$1.00 for 5 pieces; $5.00 for 35 pieces.
***
Chip Inductors: Coilcraft 1008CS family-- 10 by 8 mils, ceramic construction. Full specs are available at www.coilcraft.com

Coilcraft 1008CS-270XMBC 27 nH +/- 20 percent
Coilcraft 1008CS-470XMBC 47 nH +/- 20 percent

Coilcraft 1008CS-680XKBC; 68 nanohenry, +/- 10 percent, Q(min)=65 @ 350 MHz, self-resonant frequency of 1300 MHz minimum, Rdc = 0.2 ohms max., 1 ampere DC max.

Coilcraft 1008CS-332XKBC 3300 nH +/- 10 percent

$1.00 for 8 pieces of one value or any mixture of values

***
RF power xfmr.: consists of two 1.125-inch long by 0.570 inch OD ferrite sleeves with tubing primaries. Two small circuit boards short one end of the tubes, and the other two are not connected. A section of Teflon (tm)-insulated wire passes through both tubes' centers twice, making a 1:2 turns ratio (1:4 impedance) stepup transformer (you can easily remove this winding and replace it with more turns of smaller gauge) At a (nonguaranteed) guess, the assembly might handle 100 watts of RF. The cores are type 43 ferrite.

Price: $1.50 each (scanned image available on request)

***
Pulse Engineering PE-53190 toroidal inductor for switched-mode power

supplies.
Inductance = 12.2 microhenries at zero DC; 8.7 microhenries at 2.5 A DC.

Price: $1.00 for 6
***
SAW-stabilized oscillators; intended for ECL circuits, but also
reportedly usable as LOs. All are packaged in metal DIP cans.
$4.00 each, or three assorted for $10.00

Frequencies available are:
222.222 MHz (RF Monolithics HC1279; proprietary p/n marking)
350.000 MHZ (RF Monolithics HC1301)
366.667 MHz
400.000 MHz ($2.00 ea. but not NOS; removed from PC boards)
733.333 MHz
***
Teflon- and diallyl-pthalate insulated single-point turret lugs at
$12.00 per 100 (many styles available-- e-mail a request for
information and a jpg image showing various types).
***
Feedthrough capacitors: Spectrum Control 100 pf nominal (threaded
bushing mount, hardware included). Attenuation is specified as
-10 dB at 300 MHz, and -20 dB at 1 GHz.
$.50 each, $1.00 for 3 pieces. ***ONLY 36 PIECES REMAINING***
***
Air-variable capacitors manufactured by Cardwell (their part no.
PL6348).
NOS surplus, m'fd. sometime in the 1950s.
--Configuration: consists of two plates separated by 0.1";
--Estimated capacitance range: 1-5 pf.
The adjustment shaft is 0.25" dia. by 0.5 inches long; bushing or
isolated mounting; easily disassembled for capacitance vs. frequency
modification, etc. A more-detailed description is available on request.

Price: $1.00 each, $10.00 for 12 pieces
***
Caddock MS281N NONINDUCTIVE resistors:

10 ohm +/- 5 per cent tolerance, 8 watt noninductive power film
resistors
Tinned axial leads (0.75 inches long) are formed for PC-board
insertion on 1.2-inch centers. These are NOS, bulk-packed parts.
Note: these measure well within tolerance at +/- 0.2 ohms typical. Full
specs are available in PDF format on Caddock's web site
(www.caddock.com)
but highlights are:
--Temperature coefficient of resistance: 50 ppm;
--Power rating: 8 watts at 25 C, derating to 4 watts at 150 C and
0 watts at 275 C;
--Noninductive design: serpentine film layout cancels magnetic field-
equivalent inductance of a straight piece of wire of the

resistor's body plus lead length.

Applications include:
--Current sampling;
--Cathode bias;
--Dummy loads for audio and RF applications.

Price: $1.00 each ($10.00 for 12 pieces); only 70 pieces available
****
****
* NOS Warranty policy *
****
Scanned images or digital photos of components are available on request.

If you purchase NOS tubes or components and find them unsatisfactory upon your inspection, notify me within seven days and return items in as-received condition for a full refund or replacement (if available).

This material is subject to prior sale and is supplied as-is, as new-old-stock (NOS) merchandise, with all responsibility for safe and successful application residing solely with the purchaser.

If you're searching for oddball components of any vintage, don't hesitate to inquire about availability.

****
* Shipping per order: *
****
Postage:

Add $3.20 for priority-mail shipment (U.S. only). Add $1.80 for insurance on orders over $50.00.

Foreign purchasers: please inquire for shipping charges.

Please contact me to confirm availability and reserve components before sending payments.

I accept payment via personal or cashier's check or money order drawn in U.S. dollars and made payable to "Brad Thompson".

**********Available from:**********
Brad Thompson, AA1IP
P.O. Box 307, 202 Whitaker Rd.
Meriden, NH 03770-0307
Voice:(603) 469-3351
Fax: (603) 469-3917
E-mail: brad.thompson@valley.net

2437. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$77uwrf$1il@gw.ihg.com>
Source record: 62045
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Roy McCammon <rbmccammon@mmm.com> wrote in message
news:38DA53AE.3155D893@mmm.com...
> " A. Scott Chesnick" wrote:
>
> > "If these effects turn out to be possible at optical
frequencies,
> > this material would have the crazy property that a
flashlight
> > shining on a slab can focus the light at a point on the
other
> > side. There's no way you can do that with just a sheet of
> > ordinary material," Schultz said.
>
> Sounds like a zone plate. It would need monochromatic
> (more or less) light.
>
>
>
> Opinions expressed herein are my own and may not represent those of my
employer.
>

Funny, sounds just like a lens to me!?

David.

2438. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: David Emrich <demrich@ihgtech.com.au>
Message-ID: <newscache$u9uwrf$wil@gw.ihg.com>
Source record: 62046
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Dirk Bruere <artemis@kbnet.co.uk> wrote in message
news:KIvC4.958$ED.25035@news2-win.server.ntlworld.com...
>
> A. Scott Chesnick <chesnics@zeus.nhlbi.nih.gov> wrote in message
> news:38DA4B85.B70BC22D@zeus.nhlbi.nih.gov...
> > Hello all,
> > I found this in the Washington Post yesterday.
> >
> > This seems to fit in well with the rants and raves of the recent thread
> > and violating the regular laws of physics in the least time.
> >
> >
> > Does anyone know anything else about this?
> > Regarde' Scott
> >
>
> Sounds like a relative of the photonic crystal.

Yeah, you mean a lens??

David.

2439. Collins mechanical filter F420

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Heikki Ahola <Heikki.Ahola@vtt.fi>
Message-ID: <38DB2BBE.DAC72BBD@vtt.fi>
Source record: 62047

I have a surplus Collins filter in my junkbox. According to the markings

it is for 420 kHz and somewhat larger than those filters I am familiar
with
(L = 3", DIA = 3/4"). Does anyone have any further information on this
type of an filter; in the WEB I have not found any models for this
frequency.

Thanks,

Heikki Ahola (OH 2 LZI)
Espoo, Finland

2440. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38db3164.8091023@news.eunet.yu>
Source record: 62048
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2441. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38DB49D4.4A225770@nospam.gecm.com>
Source record: 62049
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

>
> --> Isn't this basic antenna matching theory? I mean, correct me if I'm
> wrong, but haven't people been doing basically this with "antenna tuners"
> for, oh, around 70 years or more now? I don't see what's new about it.
>
> -- Marcus D. Watts

Absolutely, but the thread is more personal advertisement than exchange
of information.
Alan

2442. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DB4ED3.DD34F3D@entheosengineering.com>
Source record: 62050
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge wrote:
> ...
> And along with that is the knowledge that if it were simple, it
> would have been done. So, it's usually a good idea to exaust the
> conventional explanations first. Most experimental anomalies are
> anomalies in understanding the data, not anomalies that represent
> new phenomena. Only after all other explanations are exausted,
> is it time to consider new ones.
>
And do you mind if I ask what is your basis for the claim that "Only
after all other explanations are exhausted, is it time to consider
new ones?"

Isn't that that "Horganism" that that other poster was talking
about? How do we find the new ones if we confine ourselves to
the box of what's "already known?" There's skeptics, and then
there's those who claim to be "skeptics," but simply discount
everything outside their little box. I have at least one
example, but since it doesn't fit into most people's pre-
defined paradigm, and it involves challenging that paradigm,
the pseudo-skeptics and Horgans will dismiss it out of hand.

I call it brain lock. (the phenomenon of rejecting what they
don't already know, that is. Brain lock isn't the example of
my new information outside the "box.")

Cheers!
Rich

2443. Re: "energy sucking" simplified ? --> It aint that easy.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DB4FD4.792F9B7C@entheosengineering.com>
Source record: 62051
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.design

Science Hobbyist wrote:
>
> In article <MKDA4.51061$3b6.209234@ozemail.com.au>,
> "phil" <philpr@ozemail.com.au> wrote:
> > I see no inclusion in your analysis of the impedance of your antenna
> and
> > load.
>
> I am not yet trying to understand what is going on in my
> postulated problem. First things first. I am only
> asking a very simple question: what is the maximum power
> in R1 and R2 in the circuits shown on
> http://www.amasci.com/tesla/nearfld1.html ?
>
> From my reasoning, I conclude that the maximum
> power available to R2 in the Fig-2 antenna is MUCH
> GREATER than the maximum power available to R1 in
> the Fig-1 antenna.
>
Oh, hell. That's just impedance matching. Trivial.

Good Luck!
Rich

2444. One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: paulygman@my-deja.com
Message-ID: <8bfsbrlrm1@nnrp1.deja.com>
Source record: 62052

I am building a small one tube regenerative reciever. The tuning
circuit calls for two variable capacitors hooked up in paralel a 15 pfd
and a 100 pfd. Which is the bandset and which is the bandspread
variable capacitor? I have a 5 to 1 reduction drive dial, which
capacitor do I put it on?
Paul G
in New Jersey

Sent via Deja.com http://www.deja.com/
Before you buy.

2445. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Paul Hovnanian <hovnania@bcstec.ca.boeing.com>
Message-ID: <38DB874C.49ABE51A@bcstec.ca.boeing.com>
Source record: 62053
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

A. Scott Chesnick wrote:
>
> Hello all,
> I found this in the Washington Post yesterday.
>
> This seems to fit in well with the rants and raves of the recent thread
> and violating the regular laws of physics in the least time.
>
> Does anyone know anything else about this?
> Regarde' Scott

I've heard that there will be a major press release on developments
in this area one week from tomorrow (Saturday).

--
Paul Hovnanian | (here) mailto:hovnania@bcstec.ca.boeing.com
Software Conflagration | (there) mailto:Paul@Hovnanian.com
Control | (spam) mailto:postmaster@mouse-potato.com
----------------------+---
Your mouse has moved. Windows must be restarted for
the change to take effect. Reboot now? [OK]

2446. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38DB915C.66690EED@mmm.com>
Source record: 62054
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

David Emrich wrote:
>
> Roy McCammon <rbmccammon@mmm.com> wrote in message
> news:38DA53AE.3155D893@mmm.com...
> > " A. Scott Chesnick" wrote:
> >
> > > "If these effects turn out to be possible at optical
> frequencies,
> > > this material would have the crazy property that a
> flashlight
> > > shining on a slab can focus the light at a point on the
> other
> > > side. There's no way you can do that with just a sheet of
> > > ordinary material," Schultz said.
> >
> > Sounds like a zone plate. It would need monochromatic
> > (more or less) light.

> Funny, sounds just like a lens to me!?

Perhaps a generalized lens. The notion of a slab
indicates to me that it was flat and not an ordinary
curved lens. But a zone plate is flat and has
concentric rings of alternating properties
(usually attenuation, but could be phase shift).
Use the right monochromatic light, and it will
focus.

Anyway, the original was discussing microwaves,
which are usually generated in a fairly narrow
band, so its not surprising that it could be
focused with a structure of alternating properties
such as copper and air.

Opinions expressed herein are my own and may not represent those of my employer.

2447. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <QBMC4.29696$oc.591166@news5.giganews.com>
Source record: 62055

The 15 pF capacitor is the bandspread. Chances are you want to put the vernier on the main tuning capacitor, the 100 pF but that depends. Since the ratio of the capacitors is about 7 to 1, putting the vernier on the main tuning will make it about the same tuning rate as the bandspread. If you put it on the bandspread you will get some mighty fine tuning.

Regenerative receivers aren't very stable so you will be correcting for drift as well as finding how adjusting the amount of regeneration affects the frequency. Make sure to build it solidly and keep the heat of the tube away from the tuning components. And if you are using a speaker, don't mount it on the same chassis. If possible, use a regulated power supply.

73, Bob K6DDX

2448. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38DB97A6.48D1C71E@bright.net>
Source record: 62056

The 100pf would be the band set and the 15 would be the band spread. Opinions may vary on which cap to put the reduction drive on. It may depend on how selective a radio you are building. If you only listen to AM stations put the drive on the 100pf and you might get away with omitting the 15pf cap. If you are shooting for razor sharp selectivity and want to listen to CW and SSB then I would put it on the 15pf cap. Good luck on your project and let us know how it works out. Regens can be pretty amazing. 73.

Paul

paulygman@my-deja.com wrote:

> I am building a small one tube regenerative reciever. The tuning
> circuit calls for two variable capacitors hooked up in paralel a 15 pfd
> and a 100 pfd. Which is the bandset and which is the bandspread
> variable capacitor? I have a 5 to 1 reduction drive dial, which
> capacitor do I put it on?
> Paul G
> in New Jersey
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2449. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: sparksw4eas@mindspring.com
Message-ID: <8bgah0muj1@slb2.atl.mindspring.net>
Source record: 62057

Put it on the small cap!
Sparks W4EAS

paulygman@my-deja.com wrote in message <8bfsbrlrm1@nnrp1.deja.com>...
>I am building a small one tube regenerative reciever. The tuning
>circuit calls for two variable capacitors hooked up in paralel a 15 pfd
>and a 100 pfd. Which is the bandset and which is the bandspread
>variable capacitor? I have a 5 to 1 reduction drive dial, which
>capacitor do I put it on?
>Paul G
>in New Jersey
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

2450. need help for UHF surplus linear AM 1565 (EMEers mostly !!)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: achilles <apa159@otenet.gr>
Message-ID: <8bgct8srn1@newssrv.otenet.gr>
Source record: 62058

Hi there from sv7apq

If any info is avelable or experience in modification the "Fair's radio"
linear AM-1565 / URC for 220-400 Mhz to 432 Mhz , I would appreciated

Many thanks
Achilles sv7apq

e-mail:apa159@otenet.gr

2451. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38dbb153.485180@news.eunet.yu>
Source record: 62059
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2452. Re: Radio Frequency Technician - South Australia

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <953892189.72024103@news.indigo.ie>
Source record: 62060

>I am the IT Consultant <snip>

That posts HTML to usenet.

Ed.

--

Remove 'X' to reply.

2453. FA Tubes / Last Day

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: kb5mer@aol.com
Message-ID: <20000324143744.11764.00003321@ng-ci1.aol.com>
Source record: 62061

2 National Plate Caps
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=285555216

2 National Union 813 tubes
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=284640224

2 RCA 813 tubes
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=284645456

4 X 4CX150 tubes
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=284690556

2454. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dnjk7.at.root@radioactivex.lebesque-al.net>
Source record: 62062
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

A distraacted Rich Grise made these comments
>concerning Re: "energy sucking" simplified:

>And do you mind if I ask what is your basis for the claim that "Only
>after all other explanations are exhausted, is it time to consider
>new ones?"
>

If something can be explained by the existing theory,
how do you propose to use it to obtain a theory that is
different but not equivalent.

>about? How do we find the new ones if we confine ourselves to
>the box of what's "already known?" There's skeptics, and then

By finding phenomena that dont fit any existing explanation
as I already stated. Why are you asking something to which
you even restated my answer in the sentence you wrote before
this one?

>there's those who claim to be "skeptics," but simply discount
>everything outside their little box. I have at least one
>example, but since it doesn't fit into most people's pre-
>defined paradigm, and it involves challenging that paradigm,
>the pseudo-skeptics and Horgans will dismiss it out of hand.
>

Or in other words, because you have a limited understanding
E&M, you think it's prudent to just invent a new explanation
despite the fact that you dont have anything that a better
understanding of E&M wouldnt explain.

>I call it brain lock. (the phenomenon of rejecting what they

Yeah. Another term is "wishful thinking". See pons and fleischman
on cold fusion or bockris on transmuting elements.

>don't already know, that is. Brain lock isn't the example of
>my new information outside the "box.")

If quantum teleportation was taken seriously, and it was,
then you have an example of a rather exotic phenomenon that
until then was considered dubious at best, but because it
was shown RIGOROUSLY to exist, it wasn't considered whacko.
You apparently live in a small box where many phenomena
are outside of your understanding. Your limitations dont

apply to everyone, not all of us are so confined as to
need magik to explain things.

2455. How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Andreas Aigner <aigner.andreas@aon.at>
Message-ID: <8bgk0gnlt1@news.netway.at>
Source record: 62063

Hello everybody !

Who can tell me, how an SWR-Meter works? I am looking for good literature
and/or Web-Site.

tnx, 73 de Andreas.

2456. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38DBE288.E758CB0C@agilent.com>
Source record: 62064

Hi Ed,

OK, I had suspected you were wanting to use the amp on an antenna. I've seen diagrams for what should be very good balanced JFET preamps to do just the job you want. Wish I could remember just where! I think it was on the web on one of the ham related sites, but it might also have been an "Ideas for Design" in Electronic Design or EDN magazine. I'd say you want to connect your JFET gates directly to the antenna coupling loop, in a balanced fashion, maybe with some diode protection in case someone transmits nearby. Even just using them as followers should be OK, as I'd expect you're not hurting for signal voltage, if you keep the preamp input impedance high enough. Once you get to a low impedance, then a balun has a much better chance of doing some good. There are plenty of ways to trim the balance. I really don't think you want to try to do an RF-bandwidth instrumentation amplifier with op amps, because of the cost of really suitable op amps. The circuit I'm thinking of, I believe, was powered through a simple DC superimpsed on a coaxial feedline. Also, I think there's some good food for thought in the antenna engineering books about how and why to keep things symmetrical (balanced) in a small receiving loop...I might have a set of .gif files at home of scans of a few pages of one ref I like a lot, if you're interested.

Cheers,
Tom

K3FDY wrote:
>
> Tom:
> The small HF loops I make have a closely coupled pickup winding which serves
> as the output.

...snip...

2457. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38DBE1AD.E7A29EF7@hotmail.com>
Source record: 62065

It is a comparison of the forward and reflected RF voltages.
Two seperate rectifier diodes convert the RF into DC voltage, which drives
the meter movement to a level that is calibrated be resistors on the meters
circuit board.
the forward reading is compared to the reflected level, to get the SWR
reading.

Andreas Aigner wrote:

> Hello everybody !
>
> Who can tell me, how an SWR-Meter works? I am looking for good literature
> and/or Web-Site.
>
> tnx, 73 de Andreas.

2458. HW-9 crystal specs ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38DBED7F.A1252CBE@ica.net>
Source record: 62066

I have an HW-9 with a couple of bad crystals in the bandswitched
heterodyne
section (21.83 and 35.83 MHz.). I need to order replacements however the
crystal manufacturer that I want to deal with needs the technical
specs...ie... series or parallel, capacitance, holder type etc..

Anyone ?
Please e-mail hduff@ica.net
Thanks Hugh VA3TO

2459. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <4DSC4.16122$9M1.1061792@bgtnsc06-news.ops.worldnet.att.net>
Source record: 62067

The key to this is a dual directional coupler.
The coupler has a mainline, which connects the rig to the antenna.
It also has a forward port, and a reverse port.
Suppose you have a 100 watt signal with a 40/40 dB coupler.
The forward port would pick up 100 watts (50 dBm) minus 40 dB, which is 10 dBm, or 10 mW.
The reverse port would pick up nothing if the coupler directivity was perfect, and the load is perfect.
If you unplug the antenna, all of the signal would reflect back to the reverse port, and you would
read the 10 mW.
But let's suppose that your antenna VSWR is 1:1.5, or a 14 dB return loss.
This would reflect back 50 dBm - 14 dB minus 40 dB, which is - 4 dBm or 400 uW.

As Matt indicated, you just peak detect the two ports with a diode and filter cap, and compare
their values on two meter movements, or by using a single meter movement, you adjust the forward
port to the cal position, and switch to the reverse position.

Good luck Andreas. You will find that you can easily build your own dual directional coupler simply
with a copper circuit board and an Exacto knife.
Al

Matt Erickson wrote in message <38DBE1AD.E7A29EF7@hotmail.com>...
>It is a comparison of the forward and reflected RF voltages.
> Two seperate rectifier diodes convert the RF into DC voltage, which drives
>the meter movement to a level that is calibrated be resistors on the meters
>circuit board.
>the forward reading is compared to the reflected level, to get the SWR
>reading.
>
>Andreas Aigner wrote:
>
>> Hello everybody !
>>
>> Who can tell me, how an SWR-Meter works? I am looking for good literature
>> and/or Web-Site.
>>
>> tnx, 73 de Andreas.
>

2460. !!!Cool Site!!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Peter <peter@glgame.fr>
Message-ID: <F48761AC70C8D111837800600878CCEB02D767B8@proxylan1>
Source record: 62068
Cross-posted to: rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur

Cool <http://users.otenet.gr/~era-flor> Site!!!

2461. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: Scott Stephens <Scott2@Mediaone.net>
Message-ID: <SeYC4.4$ny.520@elnws01>
Source record: 62069
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Since this topic is being discussed on Bill's science list, I thought I would throw my 2-cents in here for your comment:

>If I recall, the speed of propagation (group velocity?) is the square root of the product of the permittivity and the permeability. So, if they are both negative, then the product will still be positive. Whether or not this was faster than light in a vacuum would depend on the magnitudes of the permittivity and the permeability, not their sign.

>I gather that it is quite possible for the phase velocity in certain transmission lines to be faster than light at certain frequencies. I have heard that you can actually measure this, by measuring the frequency and wavelength of standing waves of that frequency.

>I have never quite understood the argument that this does not mean that you can transmit real information faster than light down such a line, since real information has a multitude of frequencies, each of which travels at a different speed. They say that it has something to do with what is called group velocity.

>Does anyone out there have a good picture or analogy to explain the difference between group velocity and phase velocity?

If you got to the LLNL server (search for evanescent or superluminal or waveguide or something) you can find some very scientific papers that describe the superluminal (faster than light) 'evanescent' wave through a microwave waveguide, that has a choked section in the middle, which functions as a high-pass filter.

This high-pass filter attenuates the low frequencies more than the high, and through the miracle of the fourier transform, deludes math-impaired scientists into believing in superluminal waves (unless the are sitting back giggling at all the niave lamerz they are foolin). After perousing these LLNL papers I did a Deja search, and found some very good explanations.

Consider what happens if you generate a modulated microwave pulse and send it through the choked, high pass filter, waveguide. Measure the transmitted pulse in its middle. The received pulse is distorted and narrower because the low-frequency components have been reduced in amplitude. So you measure the center of the pulse again, and find it has traveled apparently superluminaly. NOT! It has traveled at the characteristic phase velocity, you've just changed at what point you measure. The fourier transform does this mathematicaly.

BTW an evanescent wave is a type of tunneling. The microwave signal is greatly attentuated by the above-cutoff section of choked waveguide. If you

place two prisms or optic fibers very near (nanometers), photons will 'tunnel' across the distance. The electric and magnetic fields interact. And also (I believe anyways) if particles are soliton-like entities, they are distorted by radiation and radiation reaction, which allows them to tunnel across potential barriers. An LLNL paper by Vlassov describes this.

I'm think the phenomena of negative permitivity/permiability is just a fancy array of phase-shifting microstrips in a dielectric, a sort of photonic crystal, or phased array LC network.

Scott

2462. Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8beeuj$5tb$1@nnrp1.deja.com>
Source record: 62142

In article <4.2.0.58.20000323095114.009e7c00@pop.uky.edu>,
Wlfuqu00@pop.UKy.EDU (William Fuqua) wrote:
> OOPs put the address in the Subject line!!!
>
> > Does your system require noise to work?
> >The more noise the better the resolution?
> >
> >73
> >Bill wa4lav
> >
> >
> >At 04:30 AM 3/23/00 -0800, you wrote:
> >>Date: Thu, 23 Mar 2000 00:15:21 GMT
> >>From: Mike Monett <mkmonett@hotmail.com>
> >>Subject: I Have Broken Shannon's Theorem
> >>
> >>To All,
> >>
> >> I have broken Shannon's Information Theorem.
> >>
> >> You can see the proof at
> >>
> >> http://www.geocities.com/Athens/Atlantis/1798/index.htm
>
> Cool, when are you going to share some practical apps?

dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

2463. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dlhil.at.root@radioactivex.lebesque-al.net>
Source record: 62143
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

John Woodgate made these comments concerning "energy sucking"
simplified- Round 2:

>I would hope to see a material in which the permeability and
>permittivity are of opposite sign, because the speed of light in such a
>material would be imaginary.

That's OK. It means the indec of refraction is imaginary and
light doesn't propagate. The permittivity is, in general a
complex function of frequency. You could appeal to snells
law to get n1 sin(\theta1) = (n2*) sin(\theta2) and if
n2* = i (n2) , (n2*) sin == n2 sinh.

2464. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-24 00:00:00 UTC
From: rbarris@quicksilver.com
Message-ID: <rbarris-2303001750230001@192.168.1.16>
Source record: 62144
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

In article <38DA9E8D.857FCA30@eznec.com>, Roy Lewallen <w7el@eznec.com> wrote:

> John Woodgate wrote:
> > . . .
> > I would hope to see a material in which the permeability and
> > permittivity are of opposite sign, because the speed of light in such a
> > material would be imaginary.
>
> The speed of light is the reciprocal of the square root of the product
> of the permeability and permittivity. So if both are negative, the speed
> of light is real.

Well he *did* say "of *opposite* sign"...

Rob

2465. Nano-L induction-meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Savage <savage1@pandora.be>
Message-ID: <a45D4.29229$ds6.66384@afrodite.telenet-ops.be>
Source record: 61995

Hi, maybe can someone scan and post the article of the Nano-L induction meter of the Radcom of july 1999?
Thx, best regards, Karel.

email: savage1@pandora.be

2466. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <pu6D4.9601$kk.25765@news1.mco>
Source record: 61996

Here's a link to a similar, much cheaper idea than I mentioned earlier. The MAX436 isn't cheap, and the article that was in Electronics Design [10/23/97 or 7/22/96] hasn't been e-booked, to my knowledge.

http://www.elecdesign.com/magazine/1998/dec1498/ifd/1214id.shtml

2467. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38dd00f9.24819953@news.eunet.yu>
Source record: 61997
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2468. RF Modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Clinton <cpeebles@_nospam_kootenay.net>
Message-ID: <38DD36E1.7A2A@_nospam_kootenay.net>
Source record: 61998

Hi and thanks for reading this. Does anyone know of an RF modulator schematic on the net? I'd like to build one, but haven't had much luck finding one.

Remove _nospam_ to reply

Clinton Peebles VE7KNL DN19ie
Salmo, B.C. Canada
E-Mail: cpeebles@kootenay.net

2469. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000325170702.01949.00009629@ng-dc1.aol.com>
Source record: 61999

>
>Dear Andreas,
>
>First thing to remember there is no such thing as a genuine SWR meter.
>Beware of adverts.
>
>Such a theoretical meter measures the ratio of the voltages (or
>currents) at two different places along a transmission line spaced
>1/4-wave apart. Unless such a meter has simultaneous access to these
>two different locations along the line then it cannot indicate SWR.
>And as you may already be aware, the common or garden SWR meter has
>access only to one location on the line - the place where it is
>fitted.
>
>The location in the line of the usual SWR meter, ie., immediately at
>the output of the transmitter, actually indicates the SWR on a
>non-existent line - ie., the non-existent line between the meter and
>the transmitter.
>
>How can a line of zero, or even very short length, have standing waves
>?
>--
>Regards, Reg.
>
>
>
>
>
>
>
>

I like to view SWR meters as impedance ratio meters. They indicate the ratio of the impedance of the line/load at the point they are placed in the line compared to the design impedance of the meter(usually 50 ohms).

2470. Radio mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Colin <colinlowe@jet.es>
Message-ID: <8bjcsm$jt2$1@lola.ctv.es>
Source record: 62000

Mods for the following:

Yaesu FT847
Standard C510
Icom IC2800H
Motorola GM300, GP300 and McMicro.
Kenwood TM732, TH48 and TK340

http://personales.jet.es/colinlowe/index.htm

73 de Colin

2471. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <1KbD4.170$6S6.26774@tw11.nn.bcandid.com>
Source record: 62001

The SWR can be measured on a uniform line by measuring forward and reverse powers at a single point in the line. This can be done with directional couplers, or by independently measuring current and voltage at that point. I'll write down the math for the latter if anyone wants to see it.

Matt's explanation was just fine. And you can certainly do the measurement as described below, but it's not the only way. Such an instrument does exist; it's known as a slotted line. They're used at UHF and microwave frequencies, but are not practical at HF.

The problem with SWR meters that we can afford is one of accuracy, not that there is any fundamental difficulty defining SWR in terms of measurements at one point in a line. I'll agree that if a line is extremely short (length/diameter not large) then impedance and SWR are ill-defined.

Regard, Carl WS7L

"Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
news:8bh1b7$fe2$1@plutonium.btinternet.com...
> Dear Andreas,
>
> First thing to remember there is no such thing as a genuine SWR meter.
> Beware of adverts.
>
> Such a theoretical meter measures the ratio of the voltages (or
> currents) at two different places along a transmission line spaced
> 1/4-wave apart.

2472. Schematic needed Harrison 6240A Power Supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Solomon Fernblatt <badger@telalink.net>
Message-ID: <DRdD4.14283$s65.86172@news2.atl>
Source record: 62002
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.misc,sci.electronics.equipment

Found a small benchtop power supply today at a local
hamfest. It is a Harrison (later HP) model 6240A.
Anyone know of a source for info on this oldie? It seems
to be working fine, but would be nice to have a schematic.
Please reply directly to the email address below.

Thanks for any help

Tom KA4RKT
Badger@telalink.net

2473. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DD54FE.650DB613@entheosengineering.com>
Source record: 62003
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

OK, here's one attempt at a rational response to one thing you've cited:
(please see below, just after item 3.)

William Beaty wrote:
> <snippage>
> ANYWAY, my original "crackpot claim" thought experiment went something
> like this:
>
> 1. EM plane waves are travelling through space.
>
> 2. Add an electrically small conductive object, and the waves are only
> slightly distorted as they pass nearby.
>
> 3. Make that object into a resonant antenna with high Q-factor. An
> enormous local EM field appears, and this field interacts with the
> incoming waves in the usual way (by superposition), and the sum of
> the plane waves with the nonradiating quasistatic fields of the
> nearfield region of the antenna, gives a set of plane waves with
> much more distorted wavefronts than a similar metallic object could
> ever give.
>
> Capacitively-driven resonant antenna
> http://www.amasci.com/tesla/nearfld1.html
>
My comment on this is that yes, in the diagrams on that page, you'd
probably get a pretty respectable power transmission rate, but my
counterargument is that the receiver is entirely embedded in the
dielectric of the large outer capacitor. I think this is how Tesla
achieved wireless power transmission.

Now, if you could figure out a way to turn the whole ionosphere into
one electrode of a global capacitor.....

Good Luck!
Rich

2474. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DD55DD.4FF98B70@entheosengineering.com>
Source record: 62004
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

William Beaty wrote:

<major snippage>

> So I'm *STILL* a vile heretical blasphemer who is going to destroy
> science, and I'll sway many weak minds with my disgusting propaganda! You
> can also scare little children to make them behave: if they don't go to
> bed right right this minute, the PSEUDOSCIENTIST will come and suck out
> all of your electromagnetic spherewave fluxes!!!
>
> large :) !

So, all you have to do to prove your point is to build one, and
demonstrate
it. End of discussion, we've all got egg on our faces, and you've
expanded
the context of science a notch. Pushed the envelope, so to speak.

Go for it! :-)
Rich

2475. Re: RF Modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Clinton <cpeebles@_nospam_kootenay.net>
Message-ID: <38DD733C.3883@_nospam_kootenay.net>
Source record: 62005

Clinton wrote:
>
> Hi and thanks for reading this. Does anyone know of an RF modulator

I stripped one out of an old vcr. Works great!

Remove _nospam_ to reply

Clinton Peebles VE7KNL DN19ie
Salmo, B.C. Canada
E-Mail: cpeebles@kootenay.net

2476. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DD576F.94E4782@entheosengineering.com>
Source record: 62006
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

What we need to do is learn to transmit power through the Astral
Plane.

Cheers!
Rich

De Guerin wrote:
>
> Would have worked too, except for the safety concerns .. (lots of RF power
> flying around) .. not to mention not being able to use radio at many
> frequencies ...
>
> Maybe directed microwaves would have been better .. (more concentrated
> beam) ... better still, multi-megawatt laser beam at suitabe frequency.
>
> Andre
> E-mail returned to sender -- insufficient voltage.
> Backup not found: (A)bort (R)etry (P)anic
>
>
> On Sat, 25 Mar 2000, John Woodgate wrote:
>
> > <8bhbic$b90$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> > inimitably wrote:
> > >Or is N. Tesla the problem? Tesla was trying to broadcast
> > > significant power across great distances.
> >
> > So was Yagi when he invented his famous and almost ubiquitous antenna.
> > But no-one classes him as a nut. Strange, isn't it?
> > --

2477. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DD58C1.5C746AEB@entheosengineering.com>
Source record: 62007
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

So, if you subscribe to the "Quantum-Wave Function" theory of photons,
then
for efficient transmission of power, all you need is a "Photon
Collapser,"
or maye a "Quiff Catcher." ("QWF"). Since a photon is a QWF until it's
detected
somewhere, then the whole thing collapses instantenously into a
detectable
photon. Just capture them all, and you're home free!

Cheers!
Rich

Bilge wrote:
>
> >billb@eskimo.com (William Beaty) wrote:
> >
> >> This effect, by analogy, can be used to explain how a 0.1nM atom can
> >> interact very strongly with 600nM radiation. It VISUALLY explains how such
> >> tiny ammonia atoms can generate such long microwaves in ammonia masers.
> >
> >Arent those long waves just what happens to correspond to the low energy
> >difference between electron shells?
>
> Yes. The only reason for the confusion is a refusal to take quantum
> mechanics seriously. In order to get trapped into needing to justify
> long wavelengths emitted from point sources, you first have to believe
> the photon has a size in some geometric sense which isn't compatible
> with being massless, just for starters, rather than calling it's size
> the region in space you are most likely to find it. If you take the
> probabalistic viewpoint of QM as a description of nature and don't
> need to put everything in terms of something you can see, you're better
> off. Unfortunately, cconvenient usage of an analogy in a particular
> context often ends up being taken as fact.
>

2478. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DD594D.50FE2227@entheosengineering.com>
Source record: 62008
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Yes, of course. It's called "an antenna."

Cheers!
Rich

Bilge wrote:
>
> >Photons, having no mass, are really quite big (;-).
>
> And does the photon's size "move" along with it, i.e., is the
> "size" geometrically related to to this photon? Can I hold up
> a measuring stick (in as generic a sense as required that allows
> pinning down the shape) as it goes by (by however impractical
> an experiment)?

2479. Re: RF Modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38DD787C.B646D97D@bellsouth.net>
Source record: 62009

Clinton wrote:

> Hi and thanks for reading this. Does anyone know of an RF modulator
> schematic on the net? I'd like to build one, but haven't had much luck
> finding one.
>
> ---
> Remove _nospam_ to reply
>
> Clinton Peebles VE7KNL DN19ie
> Salmo, B.C. Canada
> E-Mail: cpeebles@kootenay.net

What frequencies, how much power, what mode?

W4OP

2480. HAL P38 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: "Bob Dubinick, DC" <drdubi@swbell.net>
Message-ID: <EDhD4.989$ve.29168@news.swbell.net>
Source record: 62010
Cross-posted to:
alt.ham-radio.exotic-modes,alt.ham-radio.hf,alt.ham-radio.packet,rec.radio.amateur.digital,rec.radio.amateur.homebrew

Does anyone know if there is 3rd party software that also allows the P38 to Rx/Tx CW?

I just got the card and have limited knowledge and info available to me at this time.

Thanks,

Bob
W&#65533;ZF
drdubiNOSPAM@swbell.net

2481. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bgvnh$d43$1@plutonium.btinternet.com>
Source record: 62070
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

This extensive thread has contributed nothing towards understanding
radiation or reception from antennas. Not that this matters much. But
it has certainly been entertaining if not educational. Theoreticians
please do it agan sometime.

==========
Regards from Reg, G4FGQ
For free radio design software go to:-
http://www.btinternet.com/~g4fgq.regp
==========

2482. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bh1b7$fe2$1@plutonium.btinternet.com>
Source record: 62071

Dear Andreas,

First thing to remember there is no such thing as a genuine SWR meter.
Beware of adverts.

Such a theoretical meter measures the ratio of the voltages (or
currents) at two different places along a transmission line spaced
1/4-wave apart. Unless such a meter has simultaneous access to these
two different locations along the line then it cannot indicate SWR.
And as you may already be aware, the common or garden SWR meter has
access only to one location on the line - the place where it is
fitted.

The location in the line of the usual SWR meter, ie., immediately at
the output of the transmitter, actually indicates the SWR on a
non-existent line - ie., the non-existent line between the meter and
the transmitter.

How can a line of zero, or even very short length, have standing waves
?
--
Regards, Reg.

2483. Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: add automation <add.automation@sympatico.ca>
Message-ID: <38DC0B78.2270@sympatico.ca>
Source record: 62072

Mike Monett wrote:
>
> To All,
>
> I have broken Shannon's Information Theorem.
>
> You can see the proof at
>
> http://www.geocities.com/Athens/Atlantis/1798/index.htm
>
> (disable Java to kill the popup ads)
>
> or here
>
> http://www3.sympatico.ca/add.automation/index.htm
>
> I cannot participate in the newsgroup discussions. If anyone can
> find and confirm a flaw, please email me. But only if you have
> proven it to someone else.
>
> I won't have time to discuss the issues this raises. Sorry.
>
> This is now Public Domain everywhere except the US. Enjoy!

I had to move the links. It got too confusing to synchronize two sites
with different directory structures. The new links are below if anyone is
interested.

Best Regards,

Michael R. Monett
http://www3.sympatico.ca/add.automation/index.htm
http://www.geocities.com/Athens/Atlantis/1798/index.htm

2484. Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: add automation <add.automation@sympatico.ca>
Message-ID: <38DC0C31.786B@sympatico.ca>
Source record: 62073

add automation wrote:
>
> Mike Monett wrote:
> >
> > To All,
> >
> > I have broken Shannon's Information Theorem.
> >
> > You can see the proof at
> >
> > http://www.geocities.com/Athens/Atlantis/1798/index.htm
> >
> > (disable Java to kill the popup ads)
> >
> > or here
> >
> > http://www3.sympatico.ca/add.automation/index.htm
> >
> > I cannot participate in the newsgroup discussions. If anyone can
> > find and confirm a flaw, please email me. But only if you have
> > proven it to someone else.
> >
> > I won't have time to discuss the issues this raises. Sorry.
> >
> > This is now Public Domain everywhere except the US. Enjoy!
>
> I had to move the links. It got too confusing to synchronize two sites
> with different directory structures. The new links are below if anyone is
> interested.

Forgot to delete the comment on not having time to answer questions.

I am busy getting the source code in shape so it will run on your machine
without problems, but I would be happy to monitor the newsgroups to see
if there are any questions.

Best Regards,

Michael R. Monett
http://www3.sympatico.ca/add.automation/index.htm
http://www.geocities.com/Athens/Atlantis/1798/index.htm

2485. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <MhUC4.18618$mf.1445843@bgtnsc05-news.ops.worldnet.att.net>
Source record: 62074

Since you are just taking a ratio, it might be accurate enough.
As a sanity check, you can measure the SWR normally. Then, reverse the mainline input/output connections.
You should see the same readings, but swap the forward for reverse.
If they don't agree, then something is wrong.
Al

Reg Edwards wrote in message <8bh1b7$fe2$1@plutonium.btinternet.com>...
>Dear Andreas,
>
>First thing to remember there is no such thing as a genuine SWR meter.
>Beware of adverts.
>
>Such a theoretical meter measures the ratio of the voltages (or
>currents) at two different places along a transmission line spaced
>1/4-wave apart. Unless such a meter has simultaneous access to these
>two different locations along the line then it cannot indicate SWR.
>And as you may already be aware, the common or garden SWR meter has
>access only to one location on the line - the place where it is
>fitted.
>
>The location in the line of the usual SWR meter, ie., immediately at
>the output of the transmitter, actually indicates the SWR on a
>non-existent line - ie., the non-existent line between the meter and
>the transmitter.
>
>How can a line of zero, or even very short length, have standing waves
>?
>--
>Regards, Reg.
>
>

2486. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bhbic$b90$1@nnrp1.deja.com>
Source record: 62075
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <UBbWOMEG+TYj4I2v1eL6iomYHJ7p@4ax.com>,
dangerdav@earthlink.net wrote:
> >I'm still interested in clearly seeing where I ACTUALLY am wrong in
this
> >"energy-sucking" thing.
>
> If it violates conservation of energy, it's wrong.

Another mystery to me is the many messages which essentially
say "uh, you know that this doesn't CREATE any energy,
right?" Well, yes, why would I think otherwise?

Is there something weird about sci.physics.electromag,
where whenever someone starts explaining antennas in an
odd way, everyone suddenly assumes that perpetual motion
machines are being discussed?

Or is it because of OTHER stuff on my Weird Sci. website?
I've never brought up the topic of pertetual motion or
violations of COE in this discussion. I don't quite
see why others continue to do so.

If an antenna absorbs energy from a wave, it's not
perpetual motion. If an extremely small antenna absorbs
EM energy as if that antenna was electrically much larger
than its physical size, in what way is this a claim
that a perpetual motion machine is possible?

Or is N. Tesla the problem? Tesla was trying to broadcast
significant power across great distances. Many members
of the general public imagine that this was some sort
of perpetual motion scheme. If such thinking has gone
on for long enough, then perhaps whenever somebody even
MENTIONS the word "Tesla", skeptics assume that perpetual
motion machines are being claimed. But if they do so,
then they are making a mistake, and perhaps they would
do well to actually read what the messages say.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

Sent via Deja.com http://www.deja.com/
Before you buy.

2487. FS: Power Tubes & Sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <8bhd1e$cp9$1@nnrp1.deja.com>
Source record: 62076

********** POWER TUBES **********

450TH Eimac -- These are pulls and spares from a working
estate amp. $100 ea

7580W/4CX250R (Eimac / Amperex) pulls $25 ea --or-- 5 for $100

7204/4CX250F used tested good $20 ea
8621/4CX250FG used tested good $30 (one left)
8621/4CX250FG pull $25 (one left)
8245/4CX250K pulls $30 ea

7034/4X150A pulls $10 ea --or-- 5 for $40

4X150D pulls $5 ea
4X150G pulls $10 ea

--------- Planar Tubes-----------
2C39A pulls $10 ea (one left)
7698 pulls $10 ea
7843 pulls $10 ea
Y602B pull $10
Y2177 pulls $10 ea
EE144 pull $10

-------- Lighthouse tubes -------
2C40A pulls $10 ea
2C46 pull $10
446A pulls $10 ea

-------- Pencil tubes -----------
4043 RCA $15
6442 pull $15 ea
7554 pull $15

--------- Acorn tubes -----------
6F4 used $10
955 used $5 ea

-------- Subminiature tubes -----
Some new, some pulls... $5 ea
CK1054
CK5676
CK5703
5829
5899
5902

6021
6111
6112

--------- and the rest -----------

5763 pulls $5 ea

2-01C Eimac pull $20
4637 (RCA) pull $40
6481 new $50

and an ....

Eimac 4CW100000D (yes, that is the correct number of 000's)
with Socket mounted in very professionally made subchassis
and Filament transformer (10V 295A)
plus Radiator and plumbing
$2000 plus shipping, if necessary

This tube was used in a piece of test equipment as a series
regulator!, mostly for it's voltage handling capability and
dissipation characteristics. The plate circuit was connected with
#22 wire that really looked out of place!!! :-)

********** SOCKETS **********

"Ring" style 4 pin sockets with a small metal post similar to
Johnson 122-234, fit 5D21, 705A, 715A/B (per the Johnson catalog) used
$5 ea

Johnson 124-0311 11 pin sockets (for 8072, 8121, 8122, 3CX400, 3CX800)
used (one left) $5

Johnson 122-101 7 pin socket New (terminals tarnished from age) (for
826, 832 etc.) $15

Johnson 248 / RCA UT-106 & Other 7 Pin Septar (for 8877, 829, etc)
used $10ea

Overused Eimac SK 510 socket (One screen contact missing - lower air
channel milled off) for 4-1000A / 3-1000Z fine for a lamp! $10

4CX250 family sockets --
Johnson 124-115-2 new (tarnished from age) $25 ea, used $15 ea
Eimac SK 610 (cathode grounded) used $15 ea
Eimac SK 620 used $15 ea
Eimac SK 606 Chimneys like new! :-) $10 ea.

All of the above plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

2488. FS: Vacuum Fixed / Variable Capacitors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Marv_E_Ads@Juno.com
Message-ID: <8bhde6$d38$1@nnrp1.deja.com>
Source record: 62077

********** VACUUM VARIABLES **********

Jennings Vacuum Variables -- all used (or at least aged)

UCS-300 300pF 7.5KV $75 Front Flange w/mtng foot + gear
driven puller
UCS-300 300pF 10KV $125 Integral Front Flange + Puller

UCS-300-15S 300pF 15KV $250 with puller, later manufacture
(blue)
UCSL-750 750pF 3KV $200 with puller
CMV1-4000-0105 4000pF 5KV $250 Ceramic -- Spline shaft

R1G SPST 20KV 20Amp Vacuum Switch $100

---------Fixed vacuum caps----------

Jennings VC-12 12pF 20KV $25
D&W 75pF 20KV $40
Jennings 50pF 86KV $86
Western Elec 100pF 5KV $50 (This one hi-pot checked @ 14KV)

********** Fixed Coils **********

55 uH silver plated edge wound .200 x .05 buss wire. 5" diameter by
10" long overall $40

20uH plated #14 wire on 2&#65533;" ceramic form; aged but unused $10 ea.

********** MICROWAVE **********

Hewlett Packard 930A Switch WR-90 X - band $30
Waveline 7578E 4 port switch WR-75 M - band $30

SMA to WR75 coax to waveguide adapters $10 ea
WR75 terminations $3 ea

Note: the above are waveguide parts

IMPATT Diodes -- NOS individually packaged with test data
NEC ND8P15-5H-C 1W @ 14.8 GHz $100 ea
NEC ND8V12TU 2.5W @ 12.6 GHz $150 (one only)
Loral GC-5831E 300mw @ 12.5 Ghz $50 ea

Microwave Mixer Diodes (I think!) -- NOS in original capsule packaging
Sylvania D5163 4 pcs $50 all

All of the above plus shipping if necessary, naturally! :-)

Contact Marv, WC6W, 310 649 3111 (reasonable hours Pacific
Time please) or via: Marv_E_Ads@Juno.com

Sent via Deja.com http://www.deja.com/
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2489. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bhf9g$f50$1@nnrp1.deja.com>
Source record: 62078
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <38D3C24A.BABD608E@mlecmn.net>,
Lyle Koehler <lyle@mlecmn.net> wrote:

> I'll attempt to shed some light on question #1 with a review of
> conventional, boring, old-fashioned antenna concepts. This discussion
> will concentrate on small "electric" dipoles; small "magnetic" dipoles
> behave similarly except that their equivalent circuits are inductive
> rather than capacitive.

Yay! Excellent post! Thanks much for taking the time.

> The kicker in making an efficient energy sucking antenna is that
> extremely high Q circuits are required in the Transmatch (or whatever
> you want to call the gadget used to achieve resonance).

Exactly. Or along similar lines: if you make the antenna TOO
small, then there's no way it can work in practice, because
we lack appropriate materials. (But just wait awhile and see
if low-cost room-temp superconductors eventually make some
"energy sucking" applications a bit more feasible.)

> Here is a sample calculation of energy capture from a 50 kW, 500 kHz
> station at 10 km, using "conventional" antenna theory. The effective
> area of a small dipole at 500 kHz is about 43,000 square meters, and
in
> free space the power density from a 50 kW station at 10 km would be
> about 0.00004 watts per meter. The theoretical maximum power available
> from the short dipole is therefore about 1.7 watts. At 500 kHz, the
> wavelength is 600 meters, and a 1/100th wavelength antenna would be 6
> meters (about 20 feet) high. As stated earlier, it is fairly difficult
> to obtain 1 per cent efficiency with a 1/100 wavelength high antenna
> _and_ its matching system. That's better than any of my LowFER friends
> are doing with their 15 meter high transmitting antennas in the 160-
190
> kHz range. Assuming 1 per cent efficiency, the power delivered to the
> load in this example would be 17 milliwatts. Not bad; enough to light
an
> LED. With a really high-Q, 20-foot, resonant, energy sucking antenna,
> this is about the level of perfomance I'd expect. Maybe it's possible
to
> do better, but in no case better than the 1.7 watt limit of a small
100
> per cent efficient dipole.

This is lower than I expected, but not THAT much lower.
As I've been saying, it is the principle that fascinates
me the most. And the fact that it isn't generally discussed
in electronics mags, and the fact that I had always believed
that the LC circuit in a crystal radio was only there as
a bandpass filter. How many here were already aware that
the LC circuit in a crystal radio is almost essential to
proper operation? It makes the antenna grab more waves!
Or if you insist, it acts as an inverse impedance
transformer. But if you thought as I did that its only
function was to eliminate unwanted AM stations from the
audio output, then you are missing something interesting.

If an antenna can be made essentially lossless, then the
"energy sucking" effect becomes much more important...
and if we apply these wave-based ideas to interactions
of EM waves with atoms and molecules, we might notice
some things which have not been so obvious from a photon-
based viewpoint.

For example, if two molecules are widely separated, yet
they both have a resonance where the wavelength of
the radiation puts them within 1/4 wavelength of each
other... then any EM waves emitted by one molecule
can be largely intercepted by the other. If molecules
behave like LC resonators which have zero internal losses,
then widely-separated molecules can "talk" to each other
through their mutual AC fields at their mutual resonance
frequency.

If the physics paper in Soviet Physics is correct in
pointing out that this "energy sucking" phenomenon
is part of stimulated emission... then adjacent
molecules might be able to interact in
interesting ways. Maybe a form of "logic switching"
or simple computation can be performed with arrays
of molecules having identical resonance frequencies.
This would be a Quantum Computer, if I understand
the concept. It would really be cool if some of the
mysterious structures in protein molecules turned out
to perform quantum computations using "energy sucking"
as their mode of inter-node communications. Just
because two molecules are not in direct contact, it
doesn't mean that they cannot have significant effects
upon each other.

> In my opinion, making an antenna part of a high-Q resonator provides
no
> special properties above and beyond fulfilling (at least partially)
the
> circuit requirements for achieving maximum power transfer to the load.

Of course. The people who keep implying that "energy
sucking" is wrong in principle are making a big mistake.
Better that they should say it's boring and well known, than
trying to defeat the idea on the grounds that it violates
some part of physics or another.

The interesting part (from my viewpoint) is to
apply this piece of antenna theory to the molecular scale,
and see if it exposes any new ideas which were made obscure
when everyone thinks in terms of photons rather than EM
wave propagation.

And maybe I'll try running some flashlights and electric
shavers in my home by wrapping a big transmitter loop
around the house, and driving it with 30KHz or so.
I wonder how small a hi-Q antenna can be made, yet
still light a flashlight bulb when near a large loop
being driven with a couple of amps at 30KHz? Put it
in a plastic flashlight, or inside a toy robot?

--
((((((((((((((((((((((((O)))))))))))))))))))))))
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billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

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2490. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bhkf6$k7r$1@nnrp1.deja.com>
Source record: 62079
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <Kz3VOFHPDbG+apaj6vA3g+dbF0Nn@4ax.com>,
John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:

> William,
>
> When a website contains keywords like (I quote)
>
> "keywords: free energy antigravity physics cold fusion overunity"

AHA! NO WONDER people keep complaining. I didn't realize
that everyone was seeing that and leaping to incorrect
conclusions.

I run a huge website on Amateur Science, but also one on
Crackpot Science as well, including large email-forums
dedicated to each. To ensure that the two remain
separate, and that there is no question about which
articles are serious and which are weird stuff, the headers
in the crackpot side have those keywords, and that includes
most everything in the Tesla Coil section. I copied a page
in the Tesla Coil section when I made the nearfld1.html file.

> and claims that space is nonlinear with respect to EM propagation,
> it's bound to cause some skepticism and -dare I say it- hostility
> among people who actually try to design electronics that works.

I shouldn't have used the word "nonlinear", although at
the time it seemed quite appropriate. What looked
"nonlinear" to me was the E/M ratio in the nearfield
region of the antenna. The fields there need not be
perpendicular, nor have a 377 ohm ratio, yet those
fields are proportional to the intensity of incoming
radiation (you might even say that they are created
by that radiation). The nearfield region does not
match the impedance of free space, at least for waves
at the resonance frequency. From the viewpoint of an
EM wave, the nearfield of an antenna is a reflector/
absorber object! Or as others keep insisting, it is
simply an impedance mismatch. But when light hits a
glass prism, the air/glass interface is a "nonlinear"
step, even though the EM equations are still "linear."
(And in the case of an air/glass interface, WHERE
exactly is the "step"? Isn't it spread out over
1/4 wavelength on either side of the interface?
Think in terms of the evanscent waves in the air

when light suffers internal reflection within glass.)

> There is of course a 'hidden gotcha' in your scheme.

Which one? The lossless coil?

> There are a
> number of simple 'paradoxes' (or 'miracles' if you are so inclined)
> that recur in circuit theory. The persistant classic is the case of
> two 1 farad capacitors, one charged to 2 volts, the other at zero.

I'm well aware of that one. Physics teachers commonly
use it as a trick question on final exams (for extra credit
only, if their hearts are in the right place.)

> What happens when they are paralleled? If both wind up at 1 volt, as
> circuit theory predicts, then where did the energy go?

It oscillates as a one-turn inductor with the two
capacitors, and either heats the wires and capacitor
dielectric, or if this is just a thought experiment,
oscillates forever or perhaps radiates its energy away.

> The gotcha is that the small capacitors are not lumped capacitors,
> they are regions of space. An AC current flowing in space creates a
> magnetic field, and the combination can merrily propagate away (as
> James Clerk Maxwell so cleverly predicted), and one manifestation of
> that is called 'radiation resistance'.

It's certainly not hidden. I chose the long wavelength,
with the metal plates being a couple feet apart, running
at 500KHZ, so farfield effects would be minimized in
that example.
(Maybe I should have said 10KHz to make certain people
knew it was in the nearfield? But look at the title of
that article! NEARFIELD COUPLING AND TUNED CIRCUITS.)

In the tesceive.html article, the issue is not as simple,
but the analogy still is very close.

Tesla intended to exite the earth/ionosphere waveguide as
a resonant cavity. In that case both the transmitter and
the receiver see multiple images of each other, an overall
standing wave develops, and the coupling between widely
separate emitters and absorbers is very much like nearfield
coupling between a pair of adjacent antennas. In a resonant
cavity, when an absorber is tuned to the same frequency as
the emitter, the emitter "feels" the presence of the absorber.
The global standing wave becomes less when an absorber suddenly
appears... very much like when the two are within 1/4
wavelength of each other.

> In your example, you assumed the small capacitors were ideal
> components. They actually approach ideal if the H-component of the

> system can be 'frozen out', which can be done by making the frequency
> so low that an EM wave cannot proagate within the system... make the
> innards of the plates into a waveguide-below-cutoff at the frequency
> in use, or, equivalently, by moving the C2 plates *very* close to the
> big plates. These conditions do not prevail in the farfield case.

Obviously. That's why that website is "nearfld1.html."
That's why I instruct the reader to imagine that the plates
are a couple of feet across while the 500KHz operating
frequency is 600 meters.

> Besides, millions of professional and amateur radio designers have
> been tuning all sorts of bizarre antennas for nearly a hundred years
> now, and surely somebody would have discovered energy sucking by now
> (or maybe they did, and do, but the Black Helicopters always come and
> get 'em.)

Now I don't understand. If I continually claim that
"energy sucking" is entirely conventional, electrically-
small resonators, and you now say that amateurs don't
know that "energy sucking" exists (meaning, they don't
know that electrically small antennas can gather significant
energy if a resonator is added), then I can't make head nor
tail of the conversation.

Or perhaps you are assuming that I think "energy sucking"
violates conservation of energy? Others keep ACCUSING me
of thinking that, but if you read my posts, you'll see that
this is a straw-man argument being used by others to argue
against the importance of the electrically-small resonant
antenna concept! It's really silly. To defeat the
horrible crackpot who insists that this interesting effect
is part of conventional EM, they attack some totally
conventional science and try to prove that it is crackpottery
which is impossible even in principle.

If this confusion is caused by my OTHER weird-science article
about rotating domains in a ferrite ring, with a tuned
circuit extracting energy from nowhere... then I understand
the origin of the confusion. I'm not talking about that
article, I'm concentrating on the "tesceive.html" and the
"nearfld1.html" articles. Also, that article about the
"free energy device" involves far more than just conventional
antenna physics. If there is anything weird to be discovered
there, it involves coherent Barkhausen noise from domain-
flipping in magnetic materials. Ahem... NONLINEAR stuff. :)

> (Oops, didn't mean to seem too sarcastic, but you know the temptations
> of the Internet.) Really, you should study some electromagnetics to
> see what's going on here. You know, in many colleges nowadays, you can
> get an EE degree *without* taking a course in electromagnetics; that,
> to me, is more frightening than Black Helicopters.

I guess I'm found out. When others here launched a vehement attack with all sorts of nasty assumptions about my nature, I decided not to "defend" myself by mentioning that I'm a BSEE (for 20 years now), took all the requisite waves/fields/undergrad-phys courses, am a physics fanatic at the hobbyist level, consult on science textbooks occasionally, write project articles for a kids science webpage, hang out on PHYS-L the college physics education forum, play "science guy" for the MADSCI project, and my passion in life is to construct physics explanations which can be understood even by grade school teachers. Hence all my non-math mental models and visual representations. For a REAL challenge in physics, try explaining it to your grandmother! There's an Einstein quote about that. For a sample of my work, see:

KID'S SCIENCE PROJECTS
http://www.halcyon.com/sciclub/kidproj1.html

EXPLAINING ELECTRICITY SO PEOPLE CAN UNDERSTAND IT
http://www.amasci.com/ele-edu.html

SCIENCE ANSWERS (MADSCI PROJECT)
http://www.amasci.com/amateur/answers1.html

MISCONCEPTIONS SPREAD BY K-6 SCIENCE TEXTS
http://www.amasci.com/miscon/miscon.html

Especially take a look at HAND-DRAWN HOLOGRAPHY in the kids' science project section. Truely strange, yet entirely contained within conventional geometrical optics. (I should get a flamewar started here about whether it is *really* holography or not.)

But with all that, I never encountered the idea that a small resonator can generate a field, and hence absorb fairly long EM waves by cancelling them via superposition. Like the authors of those two physics papers, I found the idea to be fairly intriguing.

And yes, I love the crackpot stuff and maintain a large section of my amateur science site dedicated to it. After all, we crackpots count Goddard and the Wright Brothers among our number. Mainstream science is still embarassed by the fact that modern aerodynamics was founded by widely-reviled flying machine crackpots associated with no academic institutions. Me, I'm waiting for a crackpot in his/her basement to come up with a genuine "antigravity" engine. If that ever happens, it will "destroy science", meaning that physicists will never live it down! :)

--
((((((((((((((((((((((((O)))))))))))))))))))))))

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Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

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2491. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bhl9p$l45$1@nnrp1.deja.com>
Source record: 62080
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

In article <qLbvENAtvJ14EwF5@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> > Once long ago somebody told me that some engineering
> > students in a college dorm had built a device
> > which could extract enough 60Hz energy out of the
> > wiring in the building that it could run a small
> > flashlight bulb. I thought this was totally ridiculous.
> > The ambient b-field in a dorm room doesn't have the
> > energy needed to run a light bulb, no matter WHAT
> > the antenna might look like.
>
> It is indeed unlikely that one could get enough energy from the field
in
> a dormitory, even if the application of American wiring rules allowed
> the 'go' and 'return' paths to be widely separated. But a split-ring
> current transformer attached to the wiring would very likely work.

Nope, the story described some sort of black box device
sitting on a table. Before coming to understand what
tuned-primary tuned-secondary transformers can do, I
assumed the story was just fantasy.

Hey, maybe it was a really OLD dorm, with knob-and-tube wiring.
My own home is from 1925, and a small probe-coil shows that the
whole place is saturated with 60Hz b-field (and harmonics from
a couple of light dimmers.) In the living room, the "hot"
wires run across the ceiling and down to the outlets, then
the neutrals continue down into the basement. If this was
typical for very old structures, then perhaps it isn't ridiculous
to try to couple a 60Hz "tuned secondary" to the one-turn
primary in the walls. Especially if somebody has an electric
heater turned on somewhere.

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Before you buy.

2492. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8doo43.3gi.root@radioactivex.lebesque-al.net>
Source record: 62081
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

A distraacted Science Hobbyist made these comments concerning
> Re: DOH! My big "energy sucking" error!:

> Another mystery to me is the many messages which essentially
> say "uh, you know that this doesn't CREATE any energy,
> right?" Well, yes, why would I think otherwise?
>

For one thing, it's the "natural" way to circumvent having to
explain your way out of having so many of these "antennas",
that you have an effective "surface area" greater than 4*pi.
If your "antenna" were to really do what you think and cover
a larger solid angle than it physically subtends, you would
leave holes when minimally covering 4*pi, and after that you
cover the same area twice or more. Other ways around it aren't
any more convincining.

> Is there something weird about sci.physics.electromag,
> where whenever someone starts explaining antennas in an
> odd way, everyone suddenly assumes that perpetual motion
> machines are being discussed?
>
Only if it does, in which case, it's a good argument. Science
is the business of invalidation since a positive proof for a
theory is impossible. Once you find a point that two explanations
contradict each other, one has to be incorrect. If that point
happens to involve conserving energy, why look for a really
obscure principle for a conntradiction?

> violations of COE in this discussion. I don't quite
> see why others continue to do so.
>
If the topic you post brings it up implicitly, then
you've brought it up, whether you intend to or not.

> If an antenna absorbs energy from a wave, it's not
> perpetual motion. If an extremely small antenna absorbs
> EM energy as if that antenna was electrically much larger
> than its physical size, in what way is this a claim
> that a perpetual motion machine is possible?
>
Depends upon what you mean by absorb. Since you dont
believe energy that isn't absorbed is re-radiated,
but choose to believe the antenna somehow absorbs
radiation from the space around it in a way that isn't

adequately addressed by a probability distribution
which doesn't have the problem of covering more space
than there is to cover, I don't see how you can avoid
that problem. If your antenna acts 50 % larger than
it physically is, how much radiation does each antenna
absorb if you use a sufficient number to completely cover
4*pi, and hence the entire flux? According to your
procedure for optimizing, you should recover the
optimal result by retuning for resonance. Nothing
prevents that. So, you are stuck with explaining how
the energy received by the antenna can be larger than
the solid angle it subtends /4*pi while insuring no
more than what is radiated into 4*pi is ever absorbed.

> Or is N. Tesla the problem? Tesla was trying to broadcast
> significant power across great distances. Many members
> of the general public imagine that this was some sort

I personally cant remeber saying anything one way or another
regarding tesla, since I don't know much about him, nor can
I recall him being the foca;l point or reason for rejecting
anything. For some reason, people seem to invoke his name
in association with a lot of things that are kooky that
he probably had no part of in a bid to win sympathy as a
"misunderstood genius" for some self-seving purpose.
In most cases, it probably is a favor to tesla to discredit
such kookiness and misuse of his name.

> then they are making a mistake, and perhaps they would
> do well to actually read what the messages say.
>
Perhaps we have a different newsfeed or something.

--
What! 65,000 Bugs?
I guess microsoft declared
it short rather than long,
float or double.

2493. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Carl Clawson <cclawson@firstworld.net>
Message-ID: <7pYC4.9874$6S3.2001453@tw11.nn.bcandid.com>
Source record: 62082
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

"John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
news:8UzaD3BCnm24Ewvb@jmwa.demon.co.uk...
>
> I would hope to see a material in which the permeability and
> permittivity are of opposite sign, because the speed of light in such a
> material would be imaginary.
> --

This is not unusual. Near a resonance in the material the permittivity becomes complex, and the real part can go negative. The "speed of light" in this sense is the phase velocity, and for it to be imaginary (or complex) means only that the material either absorbs or amplifies the signal, depending on the sign of the imaginary part. Signal propagation velocity remains boringly less than the vacuum speed of light, although the usual concept of group velocity becomes kind of complicated. Look in an electromagnetics book under "anomalous dispersion" to read further, for example J.D Jackson, Classical Electrodynamics, 2nd ed, chapter 7.

Regards, Carl

2494. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <7P_C4.8040$Dk.19695@news2.mco>
Source record: 62083

MAX436 (transconductance amp) was featured in an Electronics Design "design showcase",in a balanced configuration, loop antenna amplifier good to 30Mhz, with discrete FETs used at the inputs. Maybe something similar is what you're wanting?

K3FDY <edek@mail.gcnet.net> wrote in message news:IMXB4.203$DY4.24347@typhoon1.gnilink.net...
> Does anyone know of a low-noise, small-signal FET op. amp. type number that
> will work as a differential RF amp. up to 30 MHz? The 97 arrl handbook
> suggests a Harris
> HFA-1102, but I am told that Harris is out-of-business?
>
> Also, can slightly mis-matched components be tolerated or compensated for
> afterwards, if one were to homebrew an op. amp. out of discrete components?
>
> Tnx, Ed W. K3FDY
>
>

2495. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dp1gv.3gi.root@radioactivex.lebesque-al.net>
Source record: 62084
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Lyle Koehler made these comments concerning
>Re: "energy sucking" simplified:
>
>The "effective area" of an antenna is equal to G*(wavelength
>squared)/(4*Pi), where G is the directive "gain". For a very small
>dipole, G is 1.5. Multiply this area by the incident power density and
>you know how much power is theoretically available from the antenna

I'm going to elaborate on the directivity here, so it doesnt give
the impression that it actually do anything mysterious. The directivity
factor only occurrs because the radiation pattern for a dipole is NOT
isotropic and no one would use a dipole in a way that didnt take advantage
of the angular distribution. What you gain from directivity, you lose
once you are much off the axis of the lobe.

If you integrate dP/d\Omega over 4*pi, you'll get the same answer
of Power radiated <= Power supplied regardless of what antenna
is used. The efficiency will never be larger that 100% and all
antennas with the same radiation efficiency will give the same
value for that integral over 4*pi.

>terminals. This area is much greater than the physical size of the

Sure. You've first turned your antenna into an isotropic
source and then compensated for it by making it bigger
to account for the anisotropy. Since it wont be used in a
manner that takes disadvanage of the anisotropy, you neglect
that the points way off axis of the lobe will be much "smaller",
so-to-speak.

>antenna, which causes a lot of confusion even among people who claim to
>be antenna experts. In practice, only a small amount of the

As you've noted, this apparently leads to confusion, so why not
use a more realistic expression for dP/d\omega? Then you can use
the power that's REALLY available rather than restating in terms
of directivity? This is the same thing that in physics would
be called a form factor in a scattering cross-section.

>Here is a sample calculation of energy capture from a 50 kW, 500 kHz
>station at 10 km, using "conventional" antenna theory. The effective
>area of a small dipole at 500 kHz is about 43,000 square meters, and in
>free space the power density from a 50 kW station at 10 km would be
>about 0.00004 watts per meter. The theoretical maximum power available

This isn't quite correct. For a dipole, you do not radiate that 50 kW
isotropically. The actual power available at that distance for
any given area depends upon the angular position about which
the area is located on the sphere. That 0.00004 watts/m^2 assumes
50 kW radiated isotropically into 4*pi at 10 km through a 1 m^2
area. For a dipole, dP/d\Omega is prop. to sin^(\theta) not 1, so
for example, a small circular area (actually asmall section of the
sphere) of angular size {\Delta\theta/over 2} you get a very different
answer for \theta = [0, {\Delta\theta\over 2}] than you get for
the same size patch at [{(pi -\Delta\theta)\over 2}, \pi].

>
>In my opinion, making an antenna part of a high-Q resonator provides no
>special properties above and beyond fulfilling (at least partially) the
>circuit requirements for achieving maximum power transfer to the load.
>--

I'll buy that.

2496. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <9ngq$bAL9F34EwUl@jmwa.demon.co.uk>
Source record: 62085
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8bhbic$b90$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>Or is N. Tesla the problem? Tesla was trying to broadcast
> significant power across great distances.

So was Yagi when he invented his famous and almost ubiquitous antenna.
But no-one classes him as a nut. Strange, isn't it?
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2497. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <LkDXPfAHKG34EwDS@jmwa.demon.co.uk>
Source record: 62086
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8bhf9g$f50$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>In article <38D3C24A.BABD608E@mlecmn.net>,
>Lyle Koehler <lyle@mlecmn.net> wrote:
>
>> I'll attempt to shed some light on question #1 with a review of
>> conventional, boring, old-fashioned antenna concepts. This discussion
>> will concentrate on small "electric" dipoles; small "magnetic" dipoles
>> behave similarly except that their equivalent circuits are inductive
>> rather than capacitive.
>
>
> Yay! Excellent post! Thanks much for taking the time.
>
>
>
>
>> The kicker in making an efficient energy sucking antenna is that
>> extremely high Q circuits are required in the Transmatch (or whatever
>> you want to call the gadget used to achieve resonance).
>
> Exactly. Or along similar lines: if you make the antenna TOO
> small, then there's no way it can work in practice, because
> we lack appropriate materials. (But just wait awhile and see
> if low-cost room-temp superconductors eventually make some
> "energy sucking" applications a bit more feasible.)
>
Don't for get that the lower you make the resistance, the less bandwidth
you get. Maybe OK for power transmission (very low powers) but difficult
for signalling.
>
[snip excellent stuff on received power]
>
> This is lower than I expected, but not THAT much lower.
> As I've been saying, it is the principle that fascinates
> me the most. And the fact that it isn't generally discussed
> in electronics mags, and the fact that I had always believed
> that the LC circuit in a crystal radio was only there as
> a bandpass filter. How many here were already aware that
> the LC circuit in a crystal radio is almost essential to
> proper operation? It makes the antenna grab more waves!
> Or if you insist, it acts as an inverse

Why 'inverse'?
> impedance
> transformer. But if you thought as I did that its only
> function was to eliminate unwanted AM stations from the
> audio output, then you are missing something interesting.
>
>
This is the point that many responders have told you has been known for
about 100 years.
>
[snip stuff about molecules]
>
> Of course. The people who keep implying that "energy
> sucking" is wrong in principle are making a big mistake.
> Better that they should say it's boring and well known, than
> trying to defeat the idea on the grounds that it violates
> some part of physics or another.

I believe you are correct. It's well-known (and beginning to get
boring).
>
>
> And maybe I'll try running some flashlights and electric
> shavers in my home by wrapping a big transmitter loop
> around the house, and driving it with 30KHz or so.
> I wonder how small a hi-Q antenna can be made, yet
> still light a flashlight bulb when near a large loop
> being driven with a couple of amps at 30KHz? Put it
> in a plastic flashlight, or inside a toy robot?

The theory and practical details of this are quite well-established. E-
mail me if you want to know more. It isn't as easy as it appears - one
problem is that you loop has significant inductance and you will need a
lot of volts to drive 2 A at 30 kHz. Unless you make the resistance of
comparable value to the inductive reactance (thus requiring even more
volts), the load power factor is abysmal and the sending-end efficiency
is also abysmal. Also, the loop radiates: the field is by no means
confined to the inside of the loop.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2498. Re: Manuals and Tubes for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Gary Brown <gbrown@mint.net>
Message-ID: <8bi6tivbk1@ruby.mint.net>
Source record: 62087
Cross-posted to:
rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.repair

Gary Brown <gbrown@mint.net> wrote in message
news:86v3k7vvr1@ruby.mint.net...
> I have photocopies of alot of manuals for Hallicrafters, Heathkit,
> Hammarlund and others.
> Also have thousands of tubes for sale. E-Mail me with your wants to:
> gbrown@mint.net
> Thank you
> Gary
>
>

2499. Re: Radio plans?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Glenn <gbrayley@idx.com.au>
Message-ID: <38dca7f5@news1.idx.com.au>
Source record: 62088

G'day Calvin,
You could try one of the homebrew sites available on the net(try your favourite search engine for "amateur radio") or I can recommend this site to you:
http://home.alphalink.com.au/~parkerp/
This is a site packed with useful info, projects and links.
Good Luck,
Glenn.

Calvin Patrick wrote in message <38D5D6BA.4EC18E65@freewwweb.com>...
>I'm looking to get started into Amateur Radio, an was wondering where
>would be a good place to start, and where I could get the plans to build
>my own radio.
>

2500. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: De Guerin <da6bd@herts.ac.uk>
Message-ID: <Pine.SO4.4.02.10003251206250.17734-100000@gemini>
Source record: 62089
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Would have worked too, except for the safety concerns .. (lots of RF power flying around) .. not to mention not being able to use radio at many frequencies ...

Maybe directed microwaves would have been better .. (more concentrated beam) ... better still, multi-megawatt laser beam at suitabe frequency.

Andre
E-mail returned to sender -- insufficient voltage.
Backup not found: (A)bort (R)etry (P)anic

On Sat, 25 Mar 2000, John Woodgate wrote:

> <8bhbic$b90$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> inimitably wrote:
> >Or is N. Tesla the problem? Tesla was trying to broadcast
> > significant power across great distances.
>
> So was Yagi when he invented his famous and almost ubiquitous antenna.
> But no-one classes him as a nut. Strange, isn't it?
> --
> Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
> Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
> I wanted to make a fully-automated nuclear-powered trawler,
> but it went into spontaneous fishing.
>
>

2501. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <A4+VY8AyJK34EwiR@jmwa.demon.co.uk>
Source record: 62090
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8bhkf6$k7r$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:

>But with all that, I never encountered the idea that a
> small resonator can generate a field, and hence absorb
> fairly long EM waves by cancelling them via superposition.
> Like the authors of those two physics papers, I found the
> idea to be fairly intriguing.

I'm glad that you mentioned your qualification, because it was clear to me that you were qualified but that there are odd lacunae in your knowledge. It happens. A certain very well-qualified person in a very responsible technical position determined that a 'neck-loop' (a sending coil for use with hearing aids that have a 'telecoil' magnetic pickup, much more common in Europe than USA) requires a 10 W amplifier to drive it whereas the correct value is about 50 mW!

The properties of small tuned antennas were determined more or less empirically a very long time ago - I don't have time or inclination to turn up Lodge's paper(s) on 'syntony' (tuning) but I wouldn't be surprised if it's in there somewhere. If not, probably in Marconi's papers. The explanation by superposition and interference may be new but ISTR MG Scroggie ('Cathode Ray') explaining ferrite rod (loopstick) antennas that way, back in 1950 when they were new.
>
>
> And yes, I love the crackpot stuff and maintain a large
> section of my amateur science site dedicated to it.
> After all, we crackpots count Goddard and the Wright
> Brothers among our number. Mainstream science is still
> embarassed by the fact that modern aerodynamics was
> founded by widely-reviled flying machine crackpots
> associated with no academic institutions. Me, I'm
> waiting for a crackpot in his/her basement to come up
> with a genuine "antigravity" engine. If that ever
> happens, it will "destroy science", meaning that
> physicists will never live it down! :)

Yes, there can be no objection to people indulging in 'crackpot science' if they want to, and there is a potential for new discoveries to be made that way. ('Basic research is what I do when I don't know what I am doing.' - Werner von Braun) What is not so acceptable is people (not William Beatty) persistently trying to ram their unfinished or easily disproved ideas into unwilling ears, and screaming 'suppression' when

they can't publish at someone else's expense. Especially these days,
when it is EASY for anyone to publish their own work at very low cost.
--
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Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
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2502. Re: Resonant power theft, intercontinental version

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <NokW8CBbbK34Ewib@jmwa.demon.co.uk>
Source record: 62091
Cross-posted to: sci.electronics.design,sciphysics.electromag,rec.radio.amateur.homebrew

<8bhl9p$l45$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:
>In article <qLbvENAtvJ14EwF5@jmwa.demon.co.uk>,
>John Woodgate <jmw@jmwa.demon.co.uk> wrote:
>> > Once long ago somebody told me that some engineering
>> > students in a college dorm had built a device
>> > which could extract enough 60Hz energy out of the
>> > wiring in the building that it could run a small
>> > flashlight bulb. I thought this was totally ridiculous.
>> > The ambient b-field in a dorm room doesn't have the
>> > energy needed to run a light bulb, no matter WHAT
>> > the antenna might look like.
>>
>> It is indeed unlikely that one could get enough energy from the field
>in
>> a dormitory, even if the application of American wiring rules allowed
>> the 'go' and 'return' paths to be widely separated. But a split-ring
>> current transformer attached to the wiring would very likely work.
>
> Nope, the story described some sort of black box device
> sitting on a table. Before coming to understand what
> tuned-primary tuned-secondary transformers can do, I
> assumed the story was just fantasy.
>
> Hey, maybe it was a really OLD dorm, with knob-and-tube wiring.
> My own home is from 1925, and a small probe-coil shows that the
> whole place is saturated with 60Hz b-field (and harmonics from
> a couple of light dimmers.)

When you say 'saturated' I suppose you mean 'permeated' - I'm not trying
to reduce this to semantics but to show that such a device is
practicable you must *quantify* the field strength.

> In the living room, the "hot"
> wires run across the ceiling and down to the outlets, then
> the neutrals continue down into the basement. If this was
> typical for very old structures, then perhaps it isn't ridiculous
> to try to couple a 60Hz "tuned secondary" to the one-turn
> primary in the walls. Especially if somebody has an electric
> heater turned on somewhere.
>
Yes, the 'go' and 'return' paths would have to be widely separated. It's
quite easy to calculate the field strength produced by the primary, but
the most practicable secondary is a solenoid with a nickel-iron core,

and it is difficult to calculate both the inductance and the 'rod permeability' (flux-concentrating factor) of such a device. Tuning it would certainly improve the results greatly.

I notice that you first wrote 'small flashlight bulb'. Yes, you might just be able to do that, with a costly solenoid (lots of nickel-iron!). It would be impracticable to work the 'light bulb' (120V 50 W?) that you mentioned later.

--

Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk

I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2503. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <KIeXUEBxdK34Ewh6@jmwa.demon.co.uk>
Source record: 62092
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

<7pYC4.9874$6S3.2001453@tw11.nn.bcandid.com>, Carl Clawson
<cclawson@firstworld.net> inimitably wrote:
>
>"John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
>news:8UzaD3BCnm24Ewvb@jmwa.demon.co.uk...
>>
>> I would hope to see a material in which the permeability and
>> permittivity are of opposite sign, because the speed of light in such a
>> material would be imaginary.
>> --
>
>This is not unusual. Near a resonance in the material the permittivity
>becomes complex, and the real part can go negative. The "speed of light" in
>this sense is the phase velocity, and for it to be imaginary (or complex)
>means only that the material either absorbs or amplifies the signal,
>depending on the sign of the imaginary part.

The imaginary part being the resistive loss/negative resistance gain.
Yes I see that.

> Signal propagation velocity
>remains boringly less than the vacuum speed of light, although the usual
>concept of group velocity becomes kind of complicated. Look in an
>electromagnetics book under "anomalous dispersion" to read further, for
>example J.D Jackson, Classical Electrodynamics, 2nd ed, chapter 7.
>
Noted, thank you.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2504. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bifjn$63t$1@plutonium.btinternet.com>
Source record: 62093
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

Depending on whether permittivity or permeability of space becomes
negative, space becomes either a low-pass or high-pass filter beyond
cut off. In either case there's no propagation. But no need to worry.
The reason we are here is because it never happens.
--
Reg.

2505. High Voltage Feedthrough caps forsale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-25 00:00:00 UTC
From: artky1k@ctel.net
Message-ID: <38dcda44.46206076@news.northlandlink.com>
Source record: 62094

I have 20 Cambion 1500 pf feedthrough caps forsale. These are gold plated and I've used them at 2,200 volts. I do not know what the upper voltage rating is.

I have digital pictures, can send via email if you want to see them before buying.

Best reasonable offer.

Art

PS:Contact promptly if you are interested on these as I will post on ebay if there is no interest via usenet.

2506. Re: WTB Lampkin Manual, FM Modulation Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <JCCD4.87333$Pa1.2413402@news6.giganews.com>
Source record: 61945

I probably have that manual. I could get it copied for you I suppose...

73, Bob K6DDX

2507. Re: WTB Lampkin Manual, FM Modulation Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: John Buck <kh7t@arrl.net>
Message-ID: <38DF17D5.11B5ED31@arrl.net>
Source record: 61946

Thanks for the response.
I have found a site that may exchange one of those for one of mine.
If that doesn't work out I will come back to you.

Again thank you.
73, John KH7T

2508. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Russ <russell@webaxs.net>
Message-ID: <38DD51CE.B0B22767@webaxs.net>
Source record: 62011

Most vswr meters measure reflection coefficient magnitude, and the nonlinear
scale on the meter converts to swr.

Hamm4fun wrote:
>
> >
> >Dear Andreas,
> >
> >First thing to remember there is no such thing as a genuine SWR meter.
> >Beware of adverts.
> >
> >Such a theoretical meter measures the ratio of the voltages (or
> >currents) at two different places along a transmission line spaced
> >1/4-wave apart. Unless such a meter has simultaneous access to these
> >two different locations along the line then it cannot indicate SWR.
> >And as you may already be aware, the common or garden SWR meter has
> >access only to one location on the line - the place where it is
> >fitted.
> >
> >The location in the line of the usual SWR meter, ie., immediately at
> >the output of the transmitter, actually indicates the SWR on a
> >non-existent line - ie., the non-existent line between the meter and
> >the transmitter.
> >
> >How can a line of zero, or even very short length, have standing waves
> >?
> >--
> >Regards, Reg.
> >
> >
> >
> >
> >
> >
> >
> >
> >
>
> I like to view SWR meters as impedance ratio meters. They indicate the ratio of
> the impedance of the line/load at the point they are placed in the line
> compared to the design impedance of the meter(usually 50 ohms).

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *

* email: russell@webaxs.net *
* Australia *
****

2509. WTB: Collins 30L-1 or KWM-2 Cabinet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Dennis Ingebretsen <pai@san.rr.com>
Message-ID: <38DD47CB.10020B15@san.rr.com>
Source record: 62012
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

I am looking for a cabinet for my Collins 30L-1 Amplifier. I understand that the KWM-2 cabinet will also fit with some minor modification. I am not looking for a museum quality unit, but will gladly pay what it is worth, depending on condition.

Please respond to: <pai@san.rr.com>

73's Dennis Ingebretsen, N6TUQ

2510. Re: Need HUMMM advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Floyd Sense <sentek@sprintmail.com>
Message-ID: <O1eD4.420$na.28661@newsread1.prod.itd.earthlink.net>
Source record: 62013
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Yes.

K8AC

Ron H <rnharsh@visi.com> wrote in message
news:kKFt4.1664$%A3.36470@ptah.visi.com...
> OBSERVATION
> I am hearing a HUMmmm in my headphones when the rig is first keyed and on
> each key closure for three or four characters. I also noticed that the
power
> output starts off a little higher and drops a few watts as the hum goes
> away.
>
> QUESTION
> Could this be a function of the capacitive power supply filter on the
final
> plate supply? No choke, just caps.....
>
> Should I be concerned???
> 73 K3PID
>
>
>

2511. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Leo Sgouros <lsgouro1@tampabay.rr.com>
Message-ID: <gweD4.2873$Es3.9111@typhoon.tampabay.rr.com>
Source record: 62014
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

"Rich Grise" <offduty@entheosengineering.com> wrote in message
news:38DD576F.94E4782@entheosengineering.com...
> What we need to do is learn to transmit power through the Astral
> Plane.
>
> Cheers!
> Rich
>

earth magic?

> De Guerin wrote:
> >
> > Would have worked too, except for the safety concerns .. (lots of RF
power
> > flying around) .. not to mention not being able to use radio at many
> > frequencies ...
> >
> > Maybe directed microwaves would have been better .. (more concentrated
> > beam) ... better still, multi-megawatt laser beam at suitabe frequency.
> >
> > Andre
> > E-mail returned to sender -- insufficient voltage.
> > Backup not found: (A)bort (R)etry (P)anic
> >
> >
> > On Sat, 25 Mar 2000, John Woodgate wrote:
> >
> > > <8bhbic$b90$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> > > inimitably wrote:
> > > >Or is N. Tesla the problem? Tesla was trying to broadcast
> > > > significant power across great distances.
> > >
> > > So was Yagi when he invented his famous and almost ubiquitous antenna.
> > > But no-one classes him as a nut. Strange, isn't it?
> > > --

2512. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dr8i0.3gi.root@radioactivex.lebesque-al.net>
Source record: 62015
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

A distraacted Rich Grise made these comments concerning Re:
>DOH! My big "energy sucking" error!:
>So, if you subscribe to the "Quantum-Wave Function" theory of photons,
>then
>for efficient transmission of power, all you need is a "Photon
>Collapser,"
>or maye a "Quiff Catcher." ("QWF"). Since a photon is a QWF until it's
>detected

There are names for such things: antenna, Ge(Li), Si(Li), felt,
black tape, or anything where charges are present.

>somewhere, then the whole thing collapses instantenously into a
>detectable
>photon. Just capture them all, and you're home free!
>

Meaning? There seems to be a shortcoming with the use of
"all" as a requirement or feature of a statistical process.

2513. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Rich Grise <offduty@entheosengineering.com>
Message-ID: <38DDA9DF.4A7239D9@entheosengineering.com>
Source record: 62016
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Leo Sgouros wrote:
>
> "Rich Grise" <offduty@entheosengineering.com> wrote in message
> news:38DD576F.94E4782@entheosengineering.com...
> > What we need to do is learn to transmit power through the Astral
> > Plane.
> >
> > Cheers!
> > Rich
> >
>
> earth magic?
>

Well, I'd have used the term, "Magick," but I don't think they're
the same thing, albeit both are outside the current paradigm.
But I think they're either different directions or different
dimensions.

In either case, it would seem there's a lot of work to do to
come up with repeatable technology that works. "Orgone" is
another thing I'd like to investigate. How does one go about
getting a research grant?

Cheers!
Rich

2514. DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <KZcHwQA5Ib34EwQO@jmwa.demon.co.uk>
Source record: 62017
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<38DD54FE.650DB613@entheosengineering.com>, Rich Grise <offduty@entheose
ngineering.com> inimitably wrote:
>Now, if you could figure out a way to turn the whole ionosphere into
>one electrode of a global capacitor.....

It already is, and it is charged up to a VERY high voltage. The d.c.
field strength at the Earth's surface is, IIRC, of the order of 100 V/m
in the absence of thunderstorm activity.

--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2515. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38dddb5b.6216146@news.eunet.yu>
Source record: 62018
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2516. Re: Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38dd5f24.5691981@news.online.no>
Source record: 62019

On Thu, 23 Mar 2000 20:27:48 -0000, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>Use program TOROID to calculate permeability of core material from
>dimensions, number of turns and measured inductance.
>----
>============================
>Regards from Reg, G4FGQ
>For free radio design software go to:-
>http://www.btinternet.com/~g4fgq.regp
>============================
>
a good idea, but still doesn't tell you anything about the power
rating

2517. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Andreas Aigner <aigner.andreas@aon.at>
Message-ID: <8bksq3$ba6$1@news.netway.at>
Source record: 62020

Hello HAMs ;-)

Thank you for your answers. I think I know how an directional coupler works. The problem is the geometric dimension. At VHF, UHF and so on, it will work fine. But at Shortwave? Carl wrote anything about 'independently measuring current and voltage at that point' (see below). I know some SWR-Meters, where the line goes through an 'transformer'. Are these of this type? My original question concerned such SWR-Meters. Sorry :-) I hope you know what I mean. And Carl, if you mean this kind of SWR-Meter, I am interested in the mathematics. Thank you.

tnx, 73 de Andreas.

Carl Clawson <cclawson@transport.com> schrieb in im Newsbeitrag:
1KbD4.170$6S6.26774@tw11.nn.bcandid.com...
> The SWR can be measured on a uniform line by measuring forward and reverse
> powers at a single point in the line. This can be done with directional
> couplers, or by independently measuring current and voltage at that point.
> I'll write down the math for the latter if anyone wants to see it.
>
> Matt's explanation was just fine. And you can certainly do the measurement
> as described below, but it's not the only way. Such an instrument does
> exist; it's known as a slotted line. They're used at UHF and microwave
> frequencies, but are not practical at HF.
>
> The problem with SWR meters that we can afford is one of accuracy, not
that
> there is any fundamental difficulty defining SWR in terms of measurements
at
> one point in a line. I'll agree that if a line is extremely short
> (length/diameter not large) then impedance and SWR are ill-defined.
>
> Regard, Carl WS7L
>
> "Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
> news:8bh1b7$fe2$1@plutonium.btinternet.com...

2518. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bktn7$bg5$1@uranium.btinternet.com>
Source record: 62021

Hamm4fun wrote ..
>
> I like to view SWR meters as impedance ratio meters. They indicate the ratio of
> the impedance of the line/load at the point they are placed in the line
> compared to the design impedance of the meter(usually 50 ohms).
==========
Sorry to disagree. They do not indicate an impedance ratio. If one impedance is 50 ohms resistive and the other is 50 ohms reactive then the indicated ratio will not 1 but infinity.

The common or garden SWR meter actually indicates the unbalance voltage in a bridge where the standard arm of the bridge is a resistance of 50 ohms. It so happens the unbalance voltage is directly proportional to the reflection coefficient with respect to 50 ohms.

The magnitude of the Ref.Coeff can vary between 0 and 1. However the meter does not indicate the phase angle of the RC which is just as important as the magnitude. Half the information is discarded !

Nevertheless, a more appropriate name for the instrument is "Reflection Coefficient Bridge".

Reg, G4FGQ

2519. Re: Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.demon.co.uk>
Message-ID: <ZuKFAbAJGf34EwR0@ifwtech.demon.co.uk>
Source record: 62022

J M Noeding wrote:
>On Thu, 23 Mar 2000 20:27:48 -0000, "Reg Edwards"
><G4fgq.Regp@btinternet.com> wrote:
>
>>Use program TOROID to calculate permeability of core material from
>>dimensions, number of turns and measured inductance.
>>----
>>==============================
>>Regards from Reg, G4FGQ
>>For free radio design software go to:-
>>http://www.btinternet.com/~g4fgq.regp
>>==============================
>>
>a good idea, but still doesn't tell you anything about the power
>rating

Well, there's always the "smoke test".

The only other solution seems to be to have a large stack of toroid data sheets from various manufacturers, and to try and match the measured AL, Q, dimensions and even paint colours to some identifiable product.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

2520. Building a simple sat-finder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Ash <ash@vvv.tf>
Message-ID: <38DE113E.19485344@vvv.tf>
Source record: 62023
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space

```
Is there a way to build a simple sat-finder?
Audiable signal or a meter doesn't matter...
Shouldn't be that hard to build should it?
Anyone got any schematics
Thanks

//Ash
```

2521. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bl6o5$o82$1@uranium.btinternet.com>
Source record: 62024
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

The capacitance of the Earth to the remainder of the universe is a meagre 707 microfarads.

2522. Re: Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bl7v6$q2s$1@uranium.btinternet.com>
Source record: 62025

> a good idea, but still doesn't tell you anything about the power
> rating
==========
The amount of power which can be dissipated internally for a given
temperature rise is matter only of shape, size, surface texture and
colour. With a little experience and practice it can be judged with
sufficient accuracy just by inspection, just as one might inspect a 1
watt resistor. ;o)

Reg.

2523. Perhaps. Was Re: I Have Broken Shannon's Theorem

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Mike Monett <mrmonett@yahoo.com>
Message-ID: <38DE69A5.577E@yahoo.com>
Source record: 62026

I have been studying Shannon's paper, and how he develops Gaussian noise and relates it to the information capacity of a channel.

Passing wideband noise through a narrow-band filter would change the maximum rate of change of Gaussian noise, the same as it changes the information capacity of a channel. In other words, the autocorrelation is no longer zero for all t.

It may be that the sampler, which depends on the randomness of noise to reject it, may find the Gaussian noise is no longer random enough from sample-to-sample to provide the same rejection capability.

The only way to show this is to generate bandwidth-limited Gaussian noise, and use it in the simulation. This would be very slow in conventional simulators.

Fortunately, I have the software framework already to do this, and will proceed.

Even so, the sampler/mixer has other very useful properties.

And not many people get a crack at Shannon in their lifetime!

Best Regards,

Michael R. Monett
mailto:mrmonett@yahoo.com

2524. Solid State Full QSK keying Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Ron H <rnharsh@visi.com>
Message-ID: <EEuD4.3621$nl2.77092@ptah.visi.com>
Source record: 62027

Some time ago I ran across an article that went into the design criteria for
a solid state switching scheme for a vacuum tube power amp. (no relays).
Anyone recall where that was or where I might find such info?

73 K3PID
rnharsh@visi.com

2525. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <Z3ijbHBAOI34Ewx9@jmwa.demon.co.uk>
Source record: 62028
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<8bl6o5$o82$1@uranium.btinternet.com>, Reg Edwards
<G4fgq.Regp@btinternet.com> inimitably wrote:
>The capacitance of the Earth to the remainder of the universe is a
>meagre 707 microfarads.
>
Well, in picofarads it's 1.13 (actually 36*pi/100) times the radius in
centimetres. So 707 uF is credible. BUT that's not the capacitance
between the ionosphere and the solid surface. I can't turn up the
formula for the capacitance between concentric spheres at this moment.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2526. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: "Cestyll O. Dywod, esq." <willi6@erols.com>
Message-ID: <38DE7D50.EEF0DAF0@erols.com>
Source record: 62029

I vote with the larger cap (100pF) as the Main Tuning control. You did not mention if the 5:1 Reduction drive was part of a vernier dial assembly, or just the reduction drive. I "modified" an Ocean Hopper some time back (40 years?) with a vernier dial with a healthy ratio. That allowed me to "log" my settings for subsequent retunes - difficult with the standard 0-100 dial. The added benefit was that I seldom had to use the fine tuning as the vernier had the same tuning ability. It did allow me to set on my XTAL freq and then tune either side a few KCs.

73, Dave - K7HMP

paulygman@my-deja.com wrote:

> I am building a small one tube regenerative reciever. The tuning
> circuit calls for two variable capacitors hooked up in paralel a 15 pfd
> and a 100 pfd. Which is the bandset and which is the bandspread
> variable capacitor? I have a 5 to 1 reduction drive dial, which
> capacitor do I put it on?
> Paul G
> in New Jersey
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2527. Re: Solid State Full QSK keying Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38DE7E58.E04D9738@hotmail.com>
Source record: 62030

Richard L. Measures AG6K, has a website with a circuit design for which you seek.

Ron H wrote:

> Some time ago I ran across an article that went into the design criteria for
> a solid state switching scheme for a vacuum tube power amp. (no relays).
> Anyone recall where that was or where I might find such info?
>
> 73 K3PID
> rnharsh@visi.com

2528. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bm0iv$3ak$1@nnrp1.deja.com>
Source record: 62031
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In article <A4+VY8AyJK34EwiR@jmwa.demon.co.uk>,
John Woodgate <jmw@jmwa.demon.co.uk> wrote:
> <8bhkf6$k7r$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
> inimitably wrote:

> I'm glad that you mentioned your qualification, because it was clear to
> me that you were qualified but that there are odd lacunae in your
> knowledge. It happens.

It's totally expected, especially in view of the fact that
digital is my specialty. I get my nose rubbed in reflections
at impedance mismatches, but everything is broadband,
and I'm never forced to confront many details about analog,
or to think about how antennas REALLY work.

What got me going was the fact that I've seen many,
many explanations of crystal radios, but I've NEVER
seen anyone explain their LC circuit as being anything
but a bandpass filter. According to such thinking, the
LC circuit is just a nicety, and without it, a crystal radio
would pick up ALL strong stations. But it certainly
doesn't work that way if you try building one.

And I've never deeply understood the operation of
those tuned-primary, tuned-secondary transformers used
interstage in transmitters. Aren't they just bandpass
filters? Apparently not.

But what really set me off was those two physics
papers. Their existence indicates that many others
besides myself have the same hole in our conceptual
structures. If people recoil in revulsion at the idea
that atoms might be like small resonant antennas,
something is seriously wrong!

If the "energy sucking" thread had fallen flat, then
I'd know it was I alone who never encountered
this bit of RF theory. Instead, it is clear that at least
a certain percentage of other knowledgable people
have similar problems. (Strange to get private
messages from people who say "I've been telling
this to colleagues for years, but they didn't believe
it.") (And very funny to watch a person saying that
such things violate physics and nobody should
discuss them, and in the same breath saying that

they are well-known phenomena, and therefor
nobody should discuss them!)

> The explanation by superposition and interference may be new

Not new, since the classical-EM explanation of the
waves around a small absorber assumes that the
absorber emits its own wavetrain, which creates the
interference pattern found around small absorbers.

What MIGHT be new (and obviously is new to at
least some people,) is the idea that if an absorber
could for some reason create a much stronger
local field (and emit a much stronger wave,)
then it would absorb far more EM energy. A
passive resonator obviously does this, but there
conceivably could be applications where an
active circuit would benefit from doing it
intentionally.

>('Basic research is what I do when I don't know what I am
> doing.' - Werner von Braun) What is not so acceptable is people (not
> William Beaty) persistently trying to ram their unfinished or easily
> disproved ideas into unwilling ears, and screaming 'suppression' when
> they can't publish at someone else's expense.

Apparently those here leaped to the conclusion that
I was doing this. (I was even accused of
hollering "suppression!!")

Could be a straw-man debating tactic, but I think it's
more. It's *exaclty* like bigotry: "these crackpots
are all the same, so we don't even have to read what
their disgusting little messages say." Then leap to
the attack without thought or without pause. They
don't hate *me*, they hate "those crackpots."

After following crackpots for about 15 years, the
only "suppression" I've ever seen is that nobody
pays attention to them. But in science, ever it
was thus, and not just for crackpots. Certainly
many mainstream theories have been "suppressed"
in similar ways until they were eventually
accepted. New ideas are frequently fought
tooth and claw before winning adherents. Planck's
Law was coined to describe this: new ideas don't
triumph by convincing their opponents, instead
the older scientists die and are replaced
by younger ones who grew up familiar with the
new idea. If LEGITIMATE ideas sometimes suffer
such treatment, imagine the barriers placed
before unorthodox ideas originated by independant

workers with no credentials. Whether or not
their ideas have merit or are supported by any
evidence, they have little chance of being
HEARD. Even their complaints are twisted
around and never actually HEARD. See:

They laughed at the Wright Brothers!
http://www.amasci.com/freenrg/arrhenus.html

When crackpots holler "suppression", I think
their real complaint is that nobody will even listen
to them long enough to hear their actual claims.
Their big mistake is to assume that they alone
are treated that way. Any close study of the
history of science reveals that this treatment is
common throughour science. Ever hear of the
"100 against Einstein" paper which was launched
as an attack against the new Relativity theory?

Today at least the supporters of unorthodox ideas
can create websites, and get them linked to the
"Crackpot portals" such as the ones listed at
http://www.amasci.com/weird/windex.html
There is even a peer-reviewed journal for
this sort of thing: JOURNAL OF SCIENTIFIC
EXPLORATION, http://www.jse.com

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty billb@eskimo.com
Amateur Science http://www.amasci.com
Seattle, WA 206-781-3320

Sent via Deja.com http://www.deja.com/
Before you buy.

2529. Lampkin Manual, FM Modulation Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: John Buck <kh7t@arrl.net>
Message-ID: <38DE826E.425BF4F1@arrl.net>
Source record: 62032

I am looking for an operator manual (or copy) for the
Lampkin 205A FM Modulation meter.

John Buck

2530. WTB Lampkin Manual, FM Modulation Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: John Buck <kh7t@arrl.net>
Message-ID: <38DE8407.E636ED69@arrl.net>
Source record: 62033

I am looking for an operator manual (or copy) for the
Lampkin 205A FM Modulation meter.

John Buck

2531. Re: Unknown ferrite cores for wide band transformers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38de53d5.68343408@news.online.no>
Source record: 62034

On Sun, 26 Mar 2000 15:48:11 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>The amount of power which can be dissipated internally for a given
>temperature rise is matter only of shape, size, surface texture and
>colour. With a little experience and practice it can be judged with
>sufficient accuracy just by inspection, just as one might inspect a 1
>watt resistor.

didn't I just say so....

2532. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bm35k$61t$1@nnrp1.deja.com>
Source record: 62035
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <38DD54FE.650DB613@entheosengineering.com>,
Rich Grise <offduty@entheosengineering.com> wrote:

> OK, here's one attempt at a rational response to one thing you've cited:

> > 3. Make that object into a resonant antenna with high Q-factor. An
> > enormous local EM field appears, and this field interacts with the
> > incoming waves in the usual way (by superposition), and the sum of
> > the plane waves with the nonradiating quasistatic fields of the
> > nearfield region of the antenna, gives a set of plane waves with
> > much more distorted wavefronts than a similar metallic object could
> > ever give.
> >
> > Capacitively-driven resonant antenna
> > http://www.amasci.com/tesla/nearfld1.html
> >
> My comment on this is that yes, in the diagrams on that page, you'd
> probably get a pretty respectable power transmission rate, but my
> counterargument is that the receiver is entirely embedded in the
> dielectric of the large outer capacitor. I think this is how Tesla
> achieved wireless power transmission.

Yep. A basic idea is to move those large plates
far away so the small plates then cannot couple to
them directly. Instead the small plates can only reach
out about 1/4 wavelength and intercept any EM
energy in the local region.

> Now, if you could figure out a way to turn the whole ionosphere into
> one electrode of a global capacitor.....

NOW you see a key idea. At ELF frequencies the
ionosphere IS basically a capacitor plate. In
particular,the earth/ionosphere waveguide is a
resonant cavity,and if driven at a higher harmonic,
many places on the earth will experience an intense
vertical e-field, just as if the ionosphere was one
conductor of a huge stripline transmission line.

Thunderstorms do "drive" this capacitor, but only
at DC. Even in clear weather, there is a significant
vertical e-field everywhere on the earth, since
thunderstorms charge the ionosphere positive
and the earth negative. The total energy in
the earth/ionosphere system is not that huge,

its something like tens of megawatts. If there
was a way to tap into it, it could only power a
medium-sized town.

A tall antenna can intercept a bit of the vertical leakage
"sky current," become charged to a high DC
voltage, and be used to run a simple
electrostatic motor such as those shown on
http://www.amasci.com/emotor/emotor.html

A physicist (at the U. of Indiana, I believe)
Dr. Oleg Jefimenko managed to get 1/16
horsepower from a variation of the Poggendorf
electrostatic motor (his was a spinning acrylic
cylinder surrounded with a "stator" array of
sharp knife-edges pointed inwards).
He powered his motor with a vertical wire
lifted by a small weather balloon. It's like a
"perpetual motion machine" that really
works. But since thunderstorms are
powered by the sun, then these electrostatic
"sky motors" are simply an exotic type of
solar energy device.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2533. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bm43a$718$1@nnrp1.deja.com>
Source record: 62036
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <38DD55DD.4FF98B70@entheosengineering.com>,
Rich Grise <offduty@entheosengineering.com> wrote:

> So, all you have to do to prove your point is to build one, and
> demonstrate
> it. End of discussion, we've all got egg on our faces, and you've
> expanded
> the context of science a notch. Pushed the envelope, so to speak.

Build one what? A crystal radio? I suppose if I
measured the received power in a crystal radio with
and without a resonator as part of it, I could show
that the version with the resonator received far more
energy than the one without. I could even dip the
inductor in a gallon of LN2 to increase the Q, and
show that the received energy was even higher.
If I do this, will scientists everywhere come and
grovel at my feet?

:)

Or perhaps you've misunderstood the nature of the
"energy-sucking antenna effect" I've been talking
about. It's certainly no perpetual motion machine.
I don't quite understand why folks here have such
a problem believing that this can work (especially
when others here have posted material from texts
on antenna theory which show that the idea is
nothing exotic.)

But seriously, a guy in Chicago mentioned that he's
built several little motors which run from resonators
tuned to local AM stations. If a fraction of a watt
is attainable from transmitters that aren't so very
far away, then a very efficient DC motor can be
spun using the irritating patter of AM disk jockies.
AM stations ARE good for something after all!

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2534. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <yasD4.1335$6S6.415121@tw11.nn.bcandid.com>
Source record: 62037

"Andreas Aigner" <aigner.andreas@aon.at> wrote in message
news:8bksq3$ba6$1@news.netway.at...
> Hello HAMs ;-)
>
> Thank you for your answers. I think I know how an directional coupler
works.
> The problem is the geometric dimension. At VHF, UHF and so on, it will
work
> fine. But at Shortwave? Carl wrote anything about 'independently measuring
> current and voltage at that point' (see below). I know some SWR-Meters,
> where the line goes through an 'transformer'. Are these of this type? My
> original question concerned such SWR-Meters. Sorry :-) I hope you know
what
> I mean. And Carl, if you mean this kind of SWR-Meter, I am interested in
the
> mathematics. Thank you.
>
> tnx, 73 de Andreas.
>

The transformer-type meter works by measuring current and voltage separately. It can indeed be thought of as a kind of directional coupler. The ARRL Antenna book and some editions of the Handbook have good explanations and some projects. Sadly, in recent years they've dropped the simplest version, which used a capacitive pickoff to measure voltage, in favor of one that uses an additional transformer.

The most common SWR meters that I've seen are variations on the following construction: A length of coax connects the input and output terminals. The outer conductor is connected at only one of the terminals. The coax passes through a toroid which has a winding on it. This serves as a transformer which produces a signal proportional to the current on the center conductor. There is no current in the outer conductor, and it serves only as an electrostatic shield to eliminate capacitive coupling to the transformer winding. A circuit is then attached to the center conductor to pick off the voltage. These two signals are fed to a bridge that outputs the sum and difference of them, which are then used to compute SWR, either digitally or by feeding to a calibrated meter. It is important to note that the sum and differences are done at RF, not DC, so the relative phases are preserved.

Here's the theory. It can be done without the complex number arithmetic, but it's much harder that way!

The general form of current and voltage in a lossless line of impedance Z0 at a distance z along the line and at time t is:

V = VF*exp(j*w*t - j*k*z) + VR*exp(j*w*t + j*k*z)
I = (VF/Z0)*exp(j*w*t - j*k*z) - (VR/Z0)*exp(j*w*t + j*k*z)

Here w (usually an omega in the textbooks) is equal to 2*pi*f where f is the frequency, and k is 2*pi/wavelength. j is the imaginary unit, and exp is the exponential function. VF and VR are the forward and reverse voltages. They are complex numbers. In other words, each has an amplitude and a phase.

This equation tells you just about everything you need to know about transmission lines. You can derive the Smith chart from it if you like.

To examine SWR, assume that the meter is at z = 0. There is nothing special about this point. To measure at a different point would just change the phases of VF and VR in such a way that the SWR would be the same, but z=0 makes the math simpler. Having set z = 0, note that everything is multiplied by exp(j*w*t). We can drop this common factor from the rest of the calculations.

The equations now read

V = VF + VR
I = (VF - VR)/Z0

Signals proportional to V and I are produced as described above. The bridge circuit then produces the sum and difference quantities

VF = (V + Z0*I)/2 and VR = (V - Z0*I)/2

SWR is defined as (|VF| + |VR|)/(|VF| - |VR|). The remainder of the problem is how to come up with this quantity. Three common ways are

1. A meter where you first read |VF| to set the forward power to a "set" mark, then flip a switch to read |VR| on a scale calibrated for SWR. These are hard to use because you constantly reset the forward power. This is very tedious to do while adjusting an antenna tuner.

2. A cross-needle meter. |VF| goes to one needle and |VR| to the other. Scales are calibrated as PF and PR, and lines of constant SWR are drawn which can be read at the crossing point of the needles. These are much better than #1 but it's still a bit hard to focus on the crossing point of the needles. Your eye is drawn to whichever needle is moving more.

3. The best is a computing SWR meter. Analog or digital circuits are arranged to perform the sums, differences, and divisions, and results are displayed as you please on an analog or digital display. My preference is the kind that uses two analog meters, one reading net power (PF - PR) and one reading SWR. These are the two quantities you really care about.

Special consideration must be taken at QRP to avoid errors due to diode drops. Germanium diodes are often used because of their low voltage drops, and op-amp circuits that linearize diode response have been used. There may be other techniques.

73 & Happy Tuning
Carl WS7L

2535. Re: Building a simple sat-finder?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B5045A629668FBD08@host62-6-109-213.netcentral.co.uk>
Source record: 62038
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.space

In article <38DE113E.19485344@vvv.tf>,
Ash <ash@vvv.tf> wrote:

>Is there a way to build a simple sat-finder?
>Audiable signal or a meter doesn't matter...
>Shouldn't be that hard to build should it?
>Anyone got any schematics
>Thanks
>
>//Ash
>

Is this for 1 - 2GHz work?
How good are you at microstrip design?

Do you like a challenge or do you simply begrudge paying out £19.95 for a ready-built one?

http://www.netcentral.co.uk/satcure/sataccs.htm

Martin

2536. Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: George Spear AA1PD <aa1pd@yahoo.com>
Message-ID: <8bm7dpaev1@nnrp1.deja.com>
Source record: 62039

I plan to get going with QRP Mobile CW using about 4 watts into a Ham stick. I am usually in the car between 9-5 and want to have some qrp fun as I drive around visiting hospitals (I am a sales engineer for a software company) I have been assuming that I want to use my 20M rig but I read a post recently here where a backpacker was advised that contacts would be easier during the day on 40 rather than 20. It was not clear why the guy posting felt this was so but it has me wondering if 20 or 40 would be the better daytime band. Any recommendations would be appreciated.

Thanks! :-)
George Spear
AA1PD
aa1pd@yahoo.com
--
George Spear
AA1PD
aa1pd@yahoo.com

Sent via Deja.com http://www.deja.com/
Before you buy.

2537. probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: niebur@russell.mb.jhu.edu
Message-ID: <m2pushgsfj.fsf@russell.mb.jhu.edu>
Source record: 62040

So, I picked up dual trace oscilloscope, a HP-1222A, at the Baltimore Hamfest. The price was very reasonable but it came without probes. It seems to be working alright; at least when I stick a paperclip in the connector I get a beautiful (distorted) 60Hz trace. So, I need to buy a probe. Four questions:

1) I suppose I need to buy _two_ probes in order to be able to use both channels simultaneously, right?

2) I won't need a third probe for the ext. trigger; just a piece of coax with a BNC connector and two pieces of wire at the other end would work for that, right?

3) Where is a good place to buy scope probes? The vendor at the hamfest recommended probemaster but they don't list the HP-1222A.

4) Should there be more than one probe available that works with this model, what should I pay attention to?

Sorry to bother the group with these questions but, of course, the scope came without manual and I could not find anything on the net (there is an oscilloscope-FAQ but it seems to be off-line, and HP does not even list the model any more on their www site).

Thanks for your information!

--Ernst KB3CEE

2538. SB-401 Relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <6sAD4.422$NZ1.39893@nntp0.chicago.il.ameritech.net>
Source record: 62041
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi All,
I need a relay RL1 for the SB-401. It is the 5-pole DT relay, Heathkit part #69-40. Used or surplus is OK.

Can anyone help?

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

2539. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38DEDCB0.6DE79D19@eznec.com>
Source record: 62042

I've had the opposite experience, and have found 40 meters great for daytime QRP. But it's been on CW. On 40 meters during the day, you'll hear stations from a radius of around 600 - 700 miles and under. Signals are a bit weak, but steady. I find signal levels to be fine for CW QRP, but they might be marginal for SSB. Also, a vertical antenna is a poor choice for this range. A horizontal antenna up between 1/4 and 1/2 wavelength is much better. So for SSB mobile operation, daytime 40 is probably not the best choice. It's fine for fixed CW operation, though, unless you live where there are very few stations within a few hundred miles.

Roy Lewallen, W7EL

xpyttl wrote:
>
> George Spear AA1PD wrote in message <8bm7dpaev1@nnrp1.deja.com>...
> >contacts would be easier during the day on 40 rather than 20. It was
> >not clear why the guy posting felt this was so but it has me wondering
> >if 20 or 40 would be the better daytime band. Any recommendations would
> >be appreciated.
>
> 40 is a tough band for QRP in the daytime - heck, it's pretty tough at
> night. From the mobile it's really rough in the daytime. My own experience
> is that 20 meter /QRP/M is a blast. And the Hamstick is one dandy antenna
> for it!
>
> 72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
> didileydadidah QRP-L #1446 Code Warriors #35

2540. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38DEDF2F.C4972DFD@eznec.com>
Source record: 62043

"Prof. Ernst Niebur" wrote:
>
> So, I picked up dual trace oscilloscope, a HP-1222A, at the Baltimore
> Hamfest. The price was very reasonable but it came without probes. It
> seems to be working alright; at least when I stick a paperclip in the
> connector I get a beautiful (distorted) 60Hz trace. So, I need to buy a
> probe. Four questions:
>
> 1) I suppose I need to buy _two_ probes in order to
> be able to use both channels simultaneously, right?

Yes.

> 2) I won't need a third probe for the ext. trigger; just a piece of
> coax with a BNC connector and two pieces of wire at the other end
> would work for that, right?

It depends on what you want to trigger from. If you'll always have a low-impedance source for the trigger, a piece of coax will be fine. But at 30 pF/foot (100 pF/m), even a fairly short piece can present a very low impedance at even moderate frequencies. So if circuit loading is a problem you'll need to use a probe for the external channel too. Of course, you can borrow one from one of the other channels if you want to watch just one channel while externally triggering.

> 3) Where is a good place to buy scope probes? The vendor at the
> hamfest recommended probemaster but they don't list the HP-1222A.

I don't have experience with low cost probes, but others have recommended a vendor.

> 4) Should there be more than one probe available that works with this model,
> what should I pay attention to?

For most purposes, 10x probes are better because they have a higher impedance and therefore load the circuit less. 1x probes are seldom necessary unless you have to deal with very small signals.

A 10x probe has to be able to accommodate the input capacitance (and resistance) of your scope input. An input resistance of 1M ohm is standard, but the capacitance is different for different scopes. So you need to make sure that the probe can be adjusted properly when connected to your scope. Tektronix scopes have the capacitance printed right at the input connector; I don't know about HP scopes.

Cheap probes are almost always a bad idea if you need really good signal fidelity. Getting very good fidelity is difficult to do, and lots of

cheap probes do a poor job. They're fine, though, for casual use, and
can be a lot cheaper than a genuine Tek or HP probe.

> Sorry to bother the group with these questions but, of course, the
> scope came without manual and I could not find anything on the net
> (there is an oscilloscope-FAQ but it seems to be off-line, and HP does
> not even list the model any more on their www site).
>
> Thanks for your information!
>
> --Ernst KB3CEE

2541. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-26 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <NBCD4.87329$Pa1.2413487@news6.giganews.com>
Source record: 62044

Ernst, the things you need to look for in a probe are:
1. Will it work into the input impedance of the oscilloscope
2. How long is the cable
3. Does it attenuate 10:1 or 1:1 or both, some even have 100:1
4. What bandwidth is of concern
5. Does the probe output connector fit the oscilloscope

You can buy probes a lot of places. The place I bought mine was Electronc Xpress or something like that. Good prices, decent selection. They have a web page and a catalog. Probes run around $15 each unless you get the ones from the 'scope company for a lot more.

73, Bob K6DDX

2542. Re: HAL P38 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Dennis Edey <vk4sx@dingoblue.net.au>
Message-ID: <38de7fbc$0$11354@news01.syd.optusnet.com.au>
Source record: 61947
Cross-posted to:
alt.ham-radio.exotic-modes,alt.ham-radio.hf,alt.ham-radio.packet,rec.radio.amateur.digital,rec.radio.amateur.homebrew

No the HAL cards don't support CW the IDENT is a sidetone generated fro
indent only,
i use XPWIN 1.2.8
great software
rgds dennis.

2543. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bm7un$3ct$1@neptunium.btinternet.com>
Source record: 61948
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

The Earth is a conductor. Wouldn't matter much if it wasn't. The capacitance between the surface of the Earth and the remainder of the universe is 707 microfarads. Why argue about it ? I've got much bigger capacitors in the power unit of this computer I am messing about with.

Capacitance is in direct proportion to the diameter of the heavenly bodies. So our Sun has a somewhat greater capacitance than ours.

But just consider the capacitance of the spiral nebulae in Andromeda to the rest of the universe. Now that IS big ! And it's not an electrolytic type either.

Stop worrying. Take an aspirin. Have a good night's sleep.
--
Regards, Reg.

2544. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <42zD4.5373$h01.40789@news1.rdc1.mi.home.com>
Source record: 61949

George Spear AA1PD wrote in message <8bm7dpaev1@nnrp1.deja.com>...
>contacts would be easier during the day on 40 rather than 20. It was
>not clear why the guy posting felt this was so but it has me wondering
>if 20 or 40 would be the better daytime band. Any recommendations would
>be appreciated.

40 is a tough band for QRP in the daytime - heck, it's pretty tough at night. From the mobile it's really rough in the daytime. My own experience is that 20 meter /QRP/M is a blast. And the Hamstick is one dandy antenna for it!

72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
didileydadidah QRP-L #1446 Code Warriors #35

2545. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8dthek.5j5.root@radioactivex.lebesque-al.net>
Source record: 61950
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist made these comments concerning
>Re: "energy-sucking antennas": not who I seem?:

> LC circuit is just a nicety, and without it, a crystal radio
> would pick up ALL strong stations. But it certainly
> doesn't work that way if you try building one.
>
> And I've never deeply understood the operation of
> those tuned-primary, tuned-secondary transformers used
> interstage in transmitters. Aren't they just bandpass
> filters? Apparently not.
>

Expand your definition of impedance matching to include the context.
Impedance matching is not always performed to obtain maximum power
at the matching point that you think is or would typically be thought
of as the matching point. (amplifiers and speakers are a notable
example, where optimal and uniform power transfer to the environment
is constrained by the way speakers work which in turn requires a
suitable impedance transformation so that the amplifier supplies
a constant volatge across the audio spectrum rather than constant
power to compensate for the characteristics of the loudspeaker).

Ultimately, the purpose of a filter is to remove parts of the signal
so "filter" is synonymous with "frequency dependent power attenuator"
which is synonymous with "frequency dependent impedance mismatch".

Instead of thinking of a high pass filter as it is usually presented,
in terms of what you build and restrictions on the load you expect,
you can look at a high pass filter:

```
-----||-----+-...-+
C | |
/ /
R \ \ R_Load
/ /
| |
```

as a frequency dependent impedance mismatch to a current divider.
The impedance of the divider is R || R_Load. The impedance of the
capacitor is 1/jwC. The maximum power is transferred when the
impedances match:

1/jwC = (R || R_Load).

for optimal solutions with fixed w and C. Implicit in the assumption
that the gain is v_out/v_in, is the restriction that you intend it
to be a voltage source so that R >> R_Load or equivalently,
(R || R_Load =~ R, leaving you with the usual:

1/jwC = R ---> |1/wC| = R , or in terms of w, w = 1/RC.

> that atoms might be like small resonant antennas,
> something is seriously wrong!
>

How about small resonant antennas act like clusters of atoms
because that's what antennas are made from? Start with the
appropriate scale for the fundamental process and interpret
it in terms of the familiar instead of starting defining the
fundamental process as what you think it should be because
it's familiar and then trying to force the real process at
a vastly different scale to behave as you expect.

> discuss them, and in the same breath saying that
> they are well-known phenomena, and therefor
> nobody should discuss them!)
>

If the person is a physicist, perhaps it's because their
collegues are polite.

> conceivably could be applications where an
> active circuit would benefit from doing it
> intentionally.
>

This picture is due to the fact that you want atoms to behave
like antennas rather than antennas to behave like groups of
atoms, which an antenna obviously is. Due to the asymmetry
in 1 atom and a lot of atoms, and the scale involved, the
two are not equivalent and determining the behaviour of an atom
by adding phenomenological parameters to groups of atoms (
an antenna) or explaining atoms in terms of groups of antennas
(groups of groups of atoms) is both convoluted and self-referential.

> After following crackpots for about 15 years, the
> only "suppression" I've ever seen is that nobody
> pays attention to them. But in science, ever it

No. That isn't true. You need only look at the billions of
dollars spent on star wars weapons systems. Or how about the
psychics and tarot card readers? Or the people suckered into
dishing out money to support a crock, whether deliberate or
the result of delusion on the part of the so-called researcher
that has no understanding that outliers aren't typically
indicative of new phenomena and at best indicate the experiments
need to be done over, by other people and with some assuracne that
other experiments have different sources of systematic error.

So, the promotion of complete bullshit disguised as science
cost me and everyone else that pays taxes money everytime
some idiot politician likes the results better than reality.
If people WANT to pay for bullshit, fine. Put bullshit in
the bufget and vote.

> Law was coined to describe this: new ideas don't
> triumph by convincing their opponents, instead
> the older scientists die and are replaced
> by younger ones who grew up familiar with the

That's a tired cliche. The people most unhappy with
quantum mechanics did the most to advance it because
they didnt like ad hoc rules and inconsistency.
Dirac really wanted the proton to be the other
solution of the equation that bears his name, but
you didn't see him clling to the idea when it was
obviosly not. Fringe science relies on ad hoc-ery
and jargon.

What I've seen in this newsgroup from the proponents
of "new science" is a REFUSAL to apply current
science, like quantum mechanics to anything except
in a way that makes it just like classical mechanics
except with a new name. That assertion you made
is crap. Most fringe science represents their so-called
science as the only advancement since maxwell or whomever
that happens to be dead for more than 100 years.

Not 1 person have I seen attempt to produce anyrhing
new or unconventional that goes beyond what is known,
only what was known 150 years ago. Since I already
have the benefit of thousands of scientists over that
150 years to check things out some, I'm hard pressed
to accept claims of "einstein got it wrong".

> before unorthodox ideas originated by independant
> workers with no credentials. Whether or not
> their ideas have merit or are supported by any

That's true in any endeavor, but at least it's not as bad in
science. Medicine and business are far more intolerant. I'm
afraid you cant improve human behaviour that has nothing
to do with science by making all opinions equal. Going
upstream against the establishment is a fact of life.

> evidence, they have little chance of being
> HEARD. Even their complaints are twisted
> around and never actually HEARD. See:
>
In that case, you should be involved in the current issues
such as the dvd cases and digital millenium copyright act
suits which will determine just how much legal right

you have to be heard, since they seek to control information.
I know of no scientists that want the job of controlling
information to earn a paycheck.

> Today at least the supporters of unorthodox ideas
> can create websites, and get them linked to the
> "Crackpot portals" such as the ones listed at
> http://www.amasci.com/weird/windex.html

At least for now. Should the current lawsuits succeed,
your ability to do so is likely to be curtailed at the
whim of someone with a conflicting interest and the
money to pay for it to prevail.

--
Subsidize fascism,
buy stock in Microsoft

2546. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: "Charles T. Young" <ctyoung@mtu.edu>
Message-ID: <8bmgmv$4g0$2@campus3.mtu.edu>
Source record: 61951

Prof. Ernst Niebur <niebur@russell.mb.jhu.edu> wrote:

Ernst:

Try Tucker for scope probes. You will probably have to pay $20
to $50 for a set. Hope that doesn't exceed the cost of the scope.The scope
probes have some tricky ways to minimise
their input capacitance and thus don't load the signal. Most applications
don't need them.
Also, get yourself some coax. Put BNC connectors on one end and
separate the braid and the center conductor on the other end and
put alligator clips on. You can use that for the sync line and other
purposes.

Old scopes are really handy and econonomical, until they die.
Then you can keep them for parts of toss them out and shop for
another.

Chuck KF8TI

2547. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: "Charles T. Young" <ctyoung@mtu.edu>
Message-ID: <8bmgoo$4g0$3@campus3.mtu.edu>
Source record: 61952

Prof. Ernst Niebur <niebur@russell.mb.jhu.edu> wrote:

You'll find Tucker on the web. They used to advertise either in
QST or 73.

Chuck

2548. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <OPzD4.1558$DY4.187799@typhoon1.gnilink.net>
Source record: 61953

Tom: ... I will take whatever info. you have to offer. Before this N/G posting, I hardly knew where to start with such a project. For the information I got so far, I have a much better sense of possibilities and maybe how to proceed? This region of the country is rural, so except for the net, there are not many resources or informed persons on this subject at my disposal. All the N/G contributors have been very helpful. My other interest about diff. amps. for the present time is to keep it as simple and inexpensive as possibly, but "expensive" is a relative thing, if I have to build any number of them? This is to remind all that I tailgate at hamfests with my certain kind of tabletop SWL loop during the summer months. My second fest of the season will be at Hagerstown, MD., May 7, for any local loop experimenters out there? QTH is 110 miles West, however.
Thanks, Ed W. , K3FDY.

Tom Bruhns wrote in message <38DBE288.E758CB0C@agilent.com>...
>Hi Ed,
>
>OK, I had suspected you were wanting to use the amp on an antenna. I've
>seen diagrams for what should be very good balanced JFET preamps to do
>just the job you want. Wish I could remember just where! I think it
>was on the web on one of the ham related sites, but it might also have
>been an "Ideas for Design" in Electronic Design or EDN magazine. I'd
>say you want to connect your JFET gates directly to the antenna coupling
>loop, in a balanced fashion, maybe with some diode protection in case
>someone transmits nearby. Even just using them as followers should be
>OK, as I'd expect you're not hurting for signal voltage, if you keep the
>preamp input impedance high enough. Once you get to a low impedance,
>then a balun has a much better chance of doing some good. There are
>plenty of ways to trim the balance. I really don't think you want to
>try to do an RF-bandwidth instrumentation amplifier with op amps,
>because of the cost of really suitable op amps. The circuit I'm
>thinking of, I believe, was powered through a simple DC superimpsed on a
>coaxial feedline. Also, I think there's some good food for thought in
>the antenna engineering books about how and why to keep things
>symmetrical (balanced) in a small receiving loop...I might have a set of
>.gif files at home of scans of a few pages of one ref I like a lot, if
>you're interested.
>
>Cheers,
>Tom
>
>
>K3FDY wrote:
>>

>> Tom:
>> The small HF loops I make have a closely coupled pickup winding which
serves
>> as the output.
>
>...snip...

2549. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000326224456.01287.00001317@ng-md1.aol.com>
Source record: 61954

>
>Hamm4fun wrote ..
>>
>> I like to view SWR meters as impedance ratio meters. They indicate
>the ratio of
>> the impedance of the line/load at the point they are placed in the
>line
>> compared to the design impedance of the meter(usually 50 ohms).
>=======================
>Sorry to disagree. They do not indicate an impedance ratio. If one
>impedance is 50 ohms resistive and the other is 50 ohms reactive then
>the indicated ratio will not 1 but infinity.
>
>The common or garden SWR meter actually indicates the unbalance
>voltage in a bridge where the standard arm of the bridge is a
>resistance of 50 ohms. It so happens the unbalance voltage is
>directly proportional to the reflection coefficient with respect to 50
>ohms.
>
>The magnitude of the Ref.Coeff can vary between 0 and 1. However the
>meter does not indicate the phase angle of the RC which is just as
>important as the magnitude. Half the information is discarded !
>
>Nevertheless, a more appropriate name for the instrument is
>"Reflection Coefficient Bridge".
>---
>Reg, G4FGQ
Yes , I know what you say is correct.I only meant that this was a useful view
of the device. I guess I could have found a better way to say it. The fact that
it does not show a 50 ohm resistive load as a match to a 50 ohm reactive load
is all the better. I am not so certain that it will appear as an infinite SWR
regardless of the distance from the meter to the load(keeping this distance
limited to a couple of wavelengths) This is something I have never tried.

2550. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <Z9hDpLAMdv34Ewx4@jmwa.demon.co.uk>
Source record: 61955
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8bm0iv$3ak$1@nnrp1.deja.com>, Science Hobbyist <bbeaty@microscan.com>
inimitably wrote:

I wrote:
>> The explanation by superposition and interference may be new
>
> Not new, since the classical-EM explanation of the
> waves around a small absorber assumes that the
> absorber emits its own wavetrain, which creates the
> interference pattern found around small absorbers.

Yes, it's well-known in *field theory*, but I meant that it is not so
well-known in the context of tuned antennas.
>
> What MIGHT be new (and obviously is new to at
> least some people,) is the idea that if an absorber
> could for some reason create a much stronger
> local field (and emit a much stronger wave,)
> then it would absorb far more EM energy. A
> passive resonator obviously does this, but there
> conceivably could be applications where an
> active circuit would benefit from doing it
> intentionally.

The 'passive amplifier' is a practical demonstration of the effect. It's
not really an amplifier, of course: it's a field concentrator and your
explanations fit it quite well. Anyone can make one. You need a
cardboard box, about 30 cm cube but it's not critical. Also, a bit more
difficult, is an air-spaced tuning cap out of an old radio. A plastic
film one out of a newer radio will work but is not as good.

You wind 50 to 100 turns of thick (1 mm^2, say) insulated wire around
the box to make a coil (inductor) and connect the cap across it. Stand a
portable radio with a ferrite antenna next to the open end of the coil
(the axes of the coil and ferrite rod should be parallel, if possible
collinear), not too near, and tune the radio to a weak station near the
middle of the AM band (MF or MW in Europe). Now try to tune the coil
with the tuning cap. If you have roughly the right number of turns on
the coil, it will tune up and the sound from the weak station will
increase strongly. If the radio is too close to the coil, there will be
a dip in sound level when the coil is exactly on-tune. If this happens,
move the radio away a bit.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839

Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2551. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <nNLMFNAniv34EwUE@jmwa.demon.co.uk>
Source record: 61956
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<slrn8dthek.5j5.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>Not 1 person have I seen attempt to produce anyrhing
> new or unconventional that goes beyond what is known,
> only what was known 150 years ago. Since I already
> have the benefit of thousands of scientists over that
> 150 years to check things out some, I'm hard pressed
> to accept claims of "einstein got it wrong".

I can't help feeling that 95 years ago you would have said the same
about relativity, with 'Newton' in place of 'Einstein'.

But we'll never know, will we?
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2552. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: wd1v@amsat.org
Message-ID: <wd1v-2703000244250001@wdonev.ne.mediaone.net>
Source record: 61957

-Ernst KB3CEE

Your Email bounces - but send me your snail mail address and I'll
send you a couple of probes.

73,

John D. Seney
http://www.qsl.net/wd1v/
Amateur Radio FAQ
Oscilloscope FAQ

2553. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8du537.5uq.root@radioactivex.lebesque-al.net>
Source record: 61958
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

A distraacted Science Hobbyist made these comments concerning
>Re: DOH! My big "energy sucking" error!:

>Yep. A basic idea is to move those large plates
>far away so the small plates then cannot couple to
>them directly. Instead the small plates can only reach
>out about 1/4 wavelength and intercept any EM
>energy in the local region.

Sorry. The small plates are ALWAYS coupled in exactly the
same way - by the capcitance. The only way the separation
can make the coupling unimportant, in which case that means
you can take them to be at infinity with no loss of generality.
In other words they cant contribute to the result in any
way and might as well be removed altogether.

>resonant cavity,and if driven at a higher harmonic,
>many places on the earth will experience an intense
>vertical e-field, just as if the ionosphere was one
>conductor of a huge stripline transmission line.

Which is just given by the electric field you get from the charge
you induce spread over 4*pi*(6300 km)^2. That's just the potential
difference you can maintain over the entire area divided by the
earth to ionosphere capacitance. I have no idea what "driving
with a higher harmonic" is going to add to this problem. Just
from energy conservation alone, figure the input energy required
for a trivial 100 V/m (by comparison, this is approximately the
E field between the two edges of a 9Volt battery along the perp-
endicular line connecting them - 5V between 2 traces on a pc board
separated by 10 mils is 125,000 V/m along the common perpendicular).

>and the earth negative. The total energy in
>the earth/ionosphere system is not that huge,
>its something like tens of megawatts. If there
>was a way to tap into it, it could only power a
>medium-sized town.
>

The only reason the potential difference can exist is if it
reflects an equilibrium condition. Otherwise, energy flows
until it happens. Work is required to acheive a non-equilibrium
condition. The only meaningful way to discuss that energy you
want to tap is to know what the energy is referenced to.
(you cant extract the energy stored between the plates of a

capacitor without placing something inside that can change
the electric field at no energy cost. The only way to "tap into
it" implies perpetual motion.

>He powered his motor with a vertical wire
>lifted by a small weather balloon. It's like a
>"perpetual motion machine" that really
>works. But since thunderstorms are
>powered by the sun, then these electrostatic
>"sky motors" are simply an exotic type of
>solar energy device.
>
But, you forgot that you have to supply the lift to place the
wire there. This isn't an insignifcant point because the same
energy that separates the charges that give rise to a potential
difference, must be overcome to keep the wire there. Since the
sunlight that heats the atmosphere and gravity determines that
distance and any mechanism your balloon uses to lift the wire
will eventually equilabrate, the wire will fall, regardless of
it's mass. Current flow means draing charge, therefore the
forces that position the ionosphere at a fixed height would
change. The most you could do is to try and take advantage
of the fluctuations about the stored energy, not the absolute
value of the total. If you want a better way to become frustrated,
try maxwell's demon or szilard engines as an example of just
how non-obvious the gotchas can be.

One thing it is possible to do is compute for free. The energy cost
is in erasure. The erasure can be the exact reversal of the computation
and in that case, the two are equal and you end up with no net loss.
It also appears you cant get the result of the computation either.

2554. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8du6dq.5uq.root@radioactivex.lebesque-al.net>
Source record: 61959
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

A distraacted John Woodgate made these comments concerning
>Re: "energy-sucking antennas": not who I seem?:
>
>I can't help feeling that 95 years ago you would have said the same
>about relativity, with 'Newton' in place of 'Einstein'.
>
I'm afraid that went over my head. If a group of people
were attempting to contrive a way to save old physics
because they didn't understand anything done in the previous
150 years, yes. In fact, that very thing is typical. The
pseudoscience done by pseudoscientists today is exactly
like someone 150 fifty years ago insisting that copernicus,
kepler, galileo and the rest were wrong and then going off
to rebuild everything with epicycles and retrograde orbits.
Then upon becoming confused, due to the sheer convoluted
model they've created and the inability to keep adding
epicycles to maintain the model, start predicting phenomena
that have already been disproven by observation with explanations
that match the observation. Finally, they claim th suprression
of epicycle physics by closed minded copernicans, hundreds
of years after copernicus.

>But we'll never know, will we?

Yeah, we will. If someone 150 years ago deccided to resurect the
ptolmaeic view of the universe and claim copernicus was mistaken,
I'm afraid I would have to say the same thing about them that I
say about the current crop of the misinformed, now.

2555. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: George Spear AA1PD <aa1pd@yahoo.com>
Message-ID: <8bndrcjeg1@nnrp1.deja.com>
Source record: 61960

Thanks for your comments Roy. I only operate CW when on HF and will be using a key strapped to my leg. I am going to read into your comments about weak signals not wanting to use a vertical etc. that for mobile CW QRP 20M would be the better band. I just had a contact yesterday from home with a fellow who had just built a 330mW Gsprat TX. We QSO'd for 30 minutes with no problems except chasing him as he drifted. I am in maine and he was in NJ. But I was using a windom at 50 feet.

George AA1PD

In article <38DEDCB0.6DE79D19@eznec.com>,
Roy Lewallen <w7el@eznec.com> wrote:
> I've had the opposite experience, and have found 40 meters great for
> daytime QRP. But it's been on CW. On 40 meters during the day, you'll
> hear stations from a radius of around 600 - 700 miles and under.
Signals
> are a bit weak, but steady. I find signal levels to be fine for CW
QRP,
> but they might be marginal for SSB. Also, a vertical antenna is a poor
> choice for this range. A horizontal antenna up between 1/4 and 1/2
> wavelength is much better. So for SSB mobile operation, daytime 40 is
> probably not the best choice. It's fine for fixed CW operation,
though,
> unless you live where there are very few stations within a few hundred
> miles.
>
> Roy Lewallen, W7EL
>
> xpyttl wrote:
> >
> > George Spear AA1PD wrote in message <8bm7dpaev1@nnrp1.deja.com>...
> > >contacts would be easier during the day on 40 rather than 20. It
was
> > >not clear why the guy posting felt this was so but it has me
wondering
> > >if 20 or 40 would be the better daytime band. Any recommendations
would
> > >be appreciated.
> >
> > 40 is a tough band for QRP in the daytime - heck, it's pretty tough
at
> > night. From the mobile it's really rough in the daytime. My own
experience
> > is that 20 meter /QRP/M is a blast. And the Hamstick is one dandy
antenna

> > for it!
> >
> > 72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
> > didileydadidah QRP-L #1446 Code Warriors #35
>
--
George Spear
AA1PD
aa1pd@yahoo.com

Sent via Deja.com http://www.deja.com/
Before you buy.

2556. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bnmmllnp1@plutonium.btinternet.com>
Source record: 61961

With a purely reactive line termination the power absorbed by the load must be zero. So the magnitude of the reflection coefficient must be unity with a phase angle of +/- 90 degrees.

The SWR is a function only of the magnitude of the reflection coefficient. The phase angle of the reflection coefficient only shifts the locations of the voltage peaks and troughs up or down the line relative to the location of the reflection.

SWR = (1 + RC) / (1 - RC).

So at the point of reflection the SWR is infinity.

If the so-called SWR meter does not indicate infinity then it must be due to imperfections in the mter.
--
Regards, Reg.

2557. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38df6580.959490@news.eunet.yu>
Source record: 61962
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2558. Source of very flexible coax cable?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Mark Nelson <mnelson@pedinc.com>
Message-ID: <38DF818D.9FFF0324@pedinc.com>
Source record: 61963

In designing a body-worn radio for a marathon runner, I need some VERY flexible (and small, of course) coax to connect the transceiver (on the waist) to a shoulder-mounted antenna. RG-174 in most of the forms familiar to me is too stiff, and would chafe the runner. Since the distance from radio to antenna isn't very long, I'm not worried about losses much (even at 900 MHz). WR Gore quoted me $500+ per assembly for their .047" coax with connectors -- I'm looking into the surplus bins at Hamfests as more appropriate to my budget. The radio will use a SMA connector.

Can anyone point me to a source (new or surplus)?

Thanks,
--
Mark Nelson

A collector of TV signal boosters and UHF converters -- God help me!
http://www.geocities.com/TelevisionCity/Set/6312/

2559. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38DF8830.511814F7@mmm.com>
Source record: 61964
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist wrote:

> I don't quite understand why folks here have such
> a problem believing that this can work

William, I think folks think that you think that
you could get as much energy as you wanted by
connecting up more and more of these resonant
antennas.

Suppose you had two of these antennas that were
widely separated and each was receiving power
equal to P. Then suppsoe you brought them together.
The total power would be reduced to less than 2P
and finally becoming P as the antennas became
coincident.

Do you agree with that?

Opinions expressed herein are my own and may not represent those of my employer.

2560. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <OXSmTrADC134Ewwe@jmwa.demon.co.uk>
Source record: 61965
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<slrn8du6dq.5uq.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>A distraacted John Woodgate made these comments concerning
>>Re: "energy-sucking antennas": not who I seem?:
> >
> >I can't help feeling that 95 years ago you would have said the same
> >about relativity, with 'Newton' in place of 'Einstein'.
> >
> I'm afraid that went over my head.

Thereby evading the issue.

End of discussion.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2561. QEX 1998 Article?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: w4ea@my-deja.com
Message-ID: <8bo6mt$en2$1@nnrp1.deja.com>
Source record: 61966

Looking for someone who might have either QEX or the CD ROM for
September 1998. In need of an article on a Bugcatcher remote switch by
Paul Protas. Please respond directly. Thanks for your time.
Dan, W4EA
w4ea@att.net

Sent via Deja.com http://www.deja.com/
Before you buy.

2562. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: CA <remove_sm6pxj@hotmail.com>
Message-ID: <yTMD4.2120$w47.4209@nntpserver.swip.net>
Source record: 61967

http://www.radiocom.net/eloop.jpg

2563. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <38DF9C5B.70D46F98@software.com>
Source record: 61968

glass2@glass2.lexington.ibm.com wrote:

> That should be sufficient for HF. I wouldn't trust it for VHF or
> above since the lead inductance could become a factor.
>
> What brand are the resistors? Are they sort of a golden brown
> anodized aluminum case with leads with eye-holes on each end? Do
> they have mounting brackets, one on each opposing end to screw them
> down? (I'm trying to describe these as best as I can.)
>
> I tried making a dummy load from these once before, and it worked
> fairly well (but not perfectly) on the bottom end of the HF
> spectrum, but it was pretty awful on the upper end, and was just
> plain useless on VHF. I'm not sure if it was because they were
> (non-inductively) wire wound, or if it was the metal case that was
> causing excessive capacity.

Just a followup for those who may be curious. The resistors I have are pretty much as described above. I wired one with short heavy copper wire to a BNC connector, and hooked this up (via a pl-259 to BNC adapter) to my MFJ 259 SWR analyzer.

SWR was flat at two-to-one from the bottom end of the analyzers range (around 2 MHz, I think) up to about 15 MHz, at which point it... wasn't flat anymore. :-(

Thanks to everyone for all your input!

best regards,
nick caruso
kb1dej

2564. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38DF9976.1BADDD2E@nospam.gecm.com>
Source record: 61969
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

My suggestion for energy sucking is to set up a newsgroup for wacky ideas, but to place piezo-electric generators under all the participants' keyboards. I expect enough energy to be generated to power a small village.
Alan

2565. WTB: Chimney for 4-400

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: rs2bk@aol.com
Message-ID: <20000327125725.11743.00003453@ng-ci1.aol.com>
Source record: 61970

Trying to find a chimney for a homebrew project with
a 4-400.
The Eimac # is 4006.

Jim w9ud

2566. Wanted!- Yaesu PB-1534A Processor Board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Steve <odin@webspan.net>
Message-ID: <sdvda3o1lul176@corp.supernews.com>
Source record: 61971
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Looking for a CLEAN PB-1534A Speech Processor Board for use in my FT-101EE.
PLS respond with price and condition. NO JUNKERS PLEASE!!!!

TNX

Steve

N2ET

2567. Re: Source of very flexible coax cable?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <38DF83E4.65BD7ED6@netdoor.com>
Source record: 61972

how much does the transceiver weigh? the mic? the antenna? I think your concerns are not real. Try Maxon or similar, everything is in the headphones and will work great,...unless of course you intend to work DX. Ahhhh.....the family radio thing with the headset and vox. Thats the ticket, yeah, talk to your girlfriend like I do, yeah...thats it, ya' talk to her naked.....!

Butch

Mark Nelson wrote:

> In designing a body-worn radio for a marathon runner, I need some VERY
> flexible (and small, of course) coax to connect the transceiver (on the
> waist) to a shoulder-mounted antenna. RG-174 in most of the forms
> familiar to me is too stiff, and would chafe the runner. Since the
> distance from radio to antenna isn't very long, I'm not worried about
> losses much (even at 900 MHz). WR Gore quoted me $500+ per assembly for
> their .047" coax with connectors -- I'm looking into the surplus bins at
> Hamfests as more appropriate to my budget. The radio will use a SMA
> connector.
>
> Can anyone point me to a source (new or surplus)?
>
> Thanks,
> --
> Mark Nelson
>
> A collector of TV signal boosters and UHF converters -- God help me!
> http://www.geocities.com/TelevisionCity/Set/6312/

2568. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bog47pir1@nnrp1.deja.com>
Source record: 61973
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <38DF8830.511814F7@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:
> Science Hobbyist wrote:
>
> > I don't quite understand why folks here have such
> > a problem believing that this can work
>
> William, I think folks think that you think that
> you could get as much energy as you wanted by
> connecting up more and more of these resonant
> antennas.

Then it's typical "newsgroup mindreading." I
think that they think that I think that they
think that I mean "XX" when I really wrote "YY".
Or something like that.

I think.

The cure is to READ messages, and not to assume
that they mean anything else than they state.

> Suppose you had two of these antennas that were
> widely separated and each was receiving power
> equal to P. Then suppsoe you brought them together.
> The total power would be reduced to less than 2P
> and finally becoming P as the antennas became
> coincident.
>
> Do you agree with that?

Certainly! If two resonant antennas were within
each others' nearfield region, then they would no
longer act as separate devices, and only a single
"antenna" would exist. The only energy available
for reception is the energy emitted by the distant
transmitter.

Things are still weird here. If one person insists
that small resonant antennas violate physical law,
and others insist that antenna textbooks describe
this type of antenna and always have... doesn't it
mean that the people objecting to the existence of
small resonant antennas are WRONG?

As a publicly-declared crackpot, I need not cover up my weird assertions to slip them under people's defenses. If I was talking about "perpetual motion machines", then I would SAY the words "perpetual motion". Over and over, so there would be no mistake.

It sounds like the main problem here is hatred. If I am a disgusting pseudoscientist, then nobody can trust a word that I say, and if I say "energy-sucking is a part of conventional physics", people either ignore it, or for some reason they imagine that I'm REALLY saying something about perpetual motion machines. Under these conditions, understanding is clouded by hatred, and discussion becomes impossible.

I could say "Ohm's law is very useful", and sundry people would attack, and try to prove that Ohm's law violates physical law. It's ridiculous.

--

((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

Sent via Deja.com http://www.deja.com/
Before you buy.

2569. wtb:sockets for 4x150g tube [8172]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: WebMonkey <webmonkey@mad.scientist.com>
Message-ID: <38DFCB00.76B8@mad.scientist.com>
Source record: 61974
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap

anyone have any of these critters around?

4x150g/8172 tubes need some sockets.

thanks for your time
--
A.C. Curtis
KBï¿½WLF - owner operator of the mighty 45 multicast repeater system
53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base
mailto:demoman@rollanet.org
http://www.rollanet.org/~demoman

2570. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38DFCA2D.121DFE9D@mmm.com>
Source record: 61975
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist wrote:
>
> In article <38DF8830.511814F7@mmm.com>,
> rbmccammon@mmm.com (Roy McCammon) wrote:
> > Science Hobbyist wrote:
> >
> > > I don't quite understand why folks here have such
> > > a problem believing that this can work
> >
> > William, I think folks think that you think that
> > you could get as much energy as you wanted by
> > connecting up more and more of these resonant
> > antennas.
>
> Then it's typical "newsgroup mindreading." I
> think that they think that I think that they
> think that I mean "XX" when I really wrote "YY".
> Or something like that.
>
> I think.
>
> The cure is to READ messages, and not to assume
> that they mean anything else than they state.
>
> > Suppose you had two of these antennas that were
> > widely separated and each was receiving power
> > equal to P. Then suppsoe you brought them together.
> > The total power would be reduced to less than 2P
> > and finally becoming P as the antennas became
> > coincident.
> >
> > Do you agree with that?
>
> Certainly! If two resonant antennas were within
> each others' nearfield region, then they would no
> longer act as separate devices, and only a single
> "antenna" would exist. The only energy available
> for reception is the energy emitted by the distant
> transmitter.

And do you also agree that there is an upper
limit as to how much energy a small resonant
antenna with lossless components can pull

out of a given incident em field from a
far away transmitter.

Opinions expressed herein are my own and may not represent those of my employer.

2571. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bokdkube1@nnrp1.deja.com>
Source record: 61976
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <slrn8du537.5uq.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> A distraacted Science Hobbyist made these comments concerning

> >and the earth negative. The total energy in
> >the earth/ionosphere system is not that huge,
> >its something like tens of megawatts. If there
> >was a way to tap into it, it could only power a
> >medium-sized town.
> >
>
> The only reason the potential difference can exist is if it
> reflects an equilibrium condition. Otherwise, energy flows
> until it happens.

You believe I'm talking theory here, not experiment?
You assume that Dr. Jefimenko's "sky-powered" motors
were a hoax or something? You're in for a suprise.

The net electrical output of thunderstorms across the
globe creates a continuing vertical current,
causing the ionosphere to be positively charged with
respect to ground. One thing you possibly aren't
considering: an equal current must flow downwards
everywhere else on Earth, otherwise the potential
at the ionosphere would be rising continuously. In
other words, thunderstorms act like DC generators,
and the earth's atmosphere acts as a resistor, not
an insulator. IIRC, the earth/ionosphere capacitor
will discharge within a few minutes if all
thunderstorms worldwide were to turn off their
charge pumps simultaneously. Earth's atmosphere
is a fairly leaky "dielectric."

> (you cant extract the energy stored between the plates of a
> capacitor without placing something inside that can change
> the electric field at no energy cost. The only way to "tap into
> it" implies perpetual motion.

No, it's just that you aren't considering the small
"leakage current" that accompanies the 100V/meter
vertical e-field. If the vertical current in the
atmosphere was zero, then you're right, there would
be no good way of extracting energy from the earth/
ionosphere capacitor, short of sending up a 50-mile

wire to make contact with the upper "plate." Since
the atmosphere contains ions caused by cosmic rays,
it behaves as a leaky insulator.

>
> >He powered his motor with a vertical wire
> >lifted by a small weather balloon. It's like a
> >"perpetual motion machine" that really
> >works. But since thunderstorms are
> >powered by the sun, then these electrostatic
> >"sky motors" are simply an exotic type of
> >solar energy device.
> >
> But, you forgot that you have to supply the lift to place the
> wire there.

You misunderstand. Jefimenko's electrostatic
motors ran continuously. Once aloft, the vertical
wire became charged through conductive contact with
the atmosphere, and not just through electrostatic
induction. The motor extracted a continuous flow of
charge from the "antenna," which flowed through the
motor and into ground. It did not simply run for a
brief time as the balloon lifted the wire. These sky-
powered motors are well-known to atmospheric
physicists, and date back to the time of Franklin's
work in electrostatics. There's nothing crackpot about
them. Unless you consider colonial printshop owners who
fly kites in thunderstorms to be vile crackpots who
will destroy science as we (knew) it.

The vertical current is possible because the atmosphere
is a conductor of the ionic type. The 100V/m vertical
e-field drives a weak vertical ion flow. Any tall
metallic structure will intercept a part of this current,
and if that structure is insulated from contact with the
ground, a small electrical load can be connected to it.
Things can be improved by attaching sharp metal points
to the top of the structure, in order to generate corona
discharge which provides more ions and locally reduces
the atmospheric conductivity above the metal structure.

Since Dr. Jefimenko claimed to have measured up to
1/16 HP, the output of his "DC antenna" might have
been a few hundred microamps at a few kilovolts.

For the overly-enthusiastic people who want to tap
into this energy source, they should become aware that
the total power in the system is less than that of
a big coal-fired plant. "Sky powered" devices might
be fun toys, but you can't run the country using
this energy source.

> If you want a better way to become frustrated,
> try maxwell's demon or szilard engines as an example of just
> how non-obvious the gotchas can be.

Or, if you confront an actual electrostatic motor
which is actually running continuously while
connected to a long vertical wire, it means that your
understanding of the physics behind it has a major
hole somewhere.

(((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

Sent via Deja.com http://www.deja.com/
Before you buy.

2572. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38DFCF9B.46F9DB64@agilent.com>
Source record: 61977

If you look on deja news, you should find good explanations in the homebrew and/or the antenna groups.

A quick answer: they sample the current and the voltage at a point on the line. The samples retain phase information. They effectively ratio the two, and the ratio chosen is impedance (resistance) for which the meter is calibrated. For example, in 50 ohm line, the ratio of voltage to current when there's only "forward" power will be 50 volts/amp = 50 ohms. If there's only "reverse" power, the ratio (because the current will be in the opposite direction for a given voltage polarity) will be -50. The measured difference from the calibration ratio will tell you the apparent amount of power in the "opposite" direction. You'll find much more detail in the old postings...I've made a few, and others have as well.

Some may argue that it's not really an SWR meter. But that's the name we've given it, and as far as I'm concerned, it's useful for telling me the SWR on a line whose impedance is nominally the same as the meter's calibration impedance. Saying it's not really an SWR meter is, to me, like saying the speedometer in a car is really not a speedometer: it can be miscalibrated, and you might use it to measure the speed when the car is up on blocks with the wheels spinning. If you misapply it, it will give you wrong answers. That shouldn't be news. And some of it comes back to just what you accept as "SWR" on a line: does the line have to be long enough that you actually have at least one voltage node and at least one voltage antinode? Or can you accept a generalized definition that allows SWR to be defined in terms of forward and reflected power as measured at a single point? I happen to accept the generalized defintion.

Cheers,
Tom

Andreas Aigner wrote:
>
> Hello everybody !
>
> Who can tell me, how an SWR-Meter works? I am looking for good literature
> and/or Web-Site.
>
> tnx, 73 de Andreas.

2573. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38DFD3CF.DF94AC2A@agilent.com>
Source record: 61978

That's just the one I was thinking of in my other followup in this
thread. Thanks! I'm glad some people have good filing systems! ;-)

Cheers,
Tom

bertram wrote:
>
> Here's a link to a similar, much cheaper idea than I mentioned earlier. The
> MAX436 isn't cheap, and the article that was in Electronics Design
> [10/23/97 or 7/22/96] hasn't been e-booked, to my knowledge.
>
> http://www.elecdesign.com/magazine/1998/dec1498/ifd/1214id.shtml

2574. Re: FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: mobile51@aol.com
Message-ID: <20000327171957.02162.00003814@ng-fb1.aol.com>
Source record: 61979

enough already! you've spammed the newsgroup for over a month with this offer
of used parts.... I contacted you twice for small items, and you wanted way too
much for them... That's the reason that you still have them... Give it up!
Everyboy has read the offer three times today.. Go away.
<<<<<<<<<<<<<<<>>>>>>>>>>>>>>>
Subject: FS: Parts for Yeasu FT-101Z
From: servis_za_elektroniku@iname.com
Date: 03/24/2000 4:15 AM Eastern Standard Time
Message-id: <38db3164.8091023@news.eunet.yu>

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working
conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2575. Looking for Amateur Radio Pioneer photographs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: robertc908@aol.com
Message-ID: <20000327172924.27964.00001062@ng-fp1.aol.com>
Source record: 61980

Does anyone out there have photos of a couple of Amateur Radio Pioneers, Ted Crosby, W6TC and Alex Stewart, WA4ZNI? A scan photo will serve our purpose. Will also pay to have them professionally copied.

73's
Bob, W4RLC (formerly WA7OGU)

2576. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38DFE629.D370D8A@eznec.com>
Source record: 61981

I tend to avoid 20 meters for QRP operation because it seems that nearly everyone on the band is wanting to work DX and it's sometimes hard to get a domestic station to ragchew. (On the other hand, if you can't fix it, feature it. It's fun, and easy, to work DX with QRP on 20.) The QRM level can get pretty high, too. But there's no doubt that daytime signals are strong and your signal will be very readable by lots of other stations (if QRM isn't too bad). And I'll defer to people who have done more QRP operating on 20 meters than I have.

Besides the fact that a vertical is more appropriate for the elevation angles you need on 20 than for daytime 40, a 20 meter mobile vertical will also be more efficient than a 40 meter one. So all and all, if I were you I think I'd go for 20. But 40 wouldn't be a totally lost cause either.

One of my more memorable QSOs was back when 10 watts input was generally considered QRP. I designed a rig to be as efficient as I could make it, and it put out about 8-1/2 watts with 10 watts input. With this rig and a CB whip antenna (base loaded with a powdered-iron toroid core coil and bumper mounted on a VW squareback), I worked JA on 40 meter CW while driving down US Highway 101 on the Oregon coast. Fun. (Of course, this wasn't daytime -- it was 1:00 or 2:00 in the morning.)

This is one of several reasons I chuckle when I hear testimonials about great DX QSOs as being proof that a particular antenna is great. I assure you, the antenna I was using really sucked. But it was good enough.

Roy Lewallen, W7EL

George Spear AA1PD wrote:
>
> Thanks for your comments Roy. I only operate CW when on HF and will be
> using a key strapped to my leg. I am going to read into your comments
> about weak signals not wanting to use a vertical etc. that for mobile
> CW QRP 20M would be the better band. I just had a contact yesterday
> from home with a fellow who had just built a 330mW Gsprat TX. We QSO'd
> for 30 minutes with no problems except chasing him as he drifted. I am
> in maine and he was in NJ. But I was using a windom at 50 feet.
>
> George AA1PD
>
> In article <38DEDCB0.6DE79D19@eznec.com>,
> Roy Lewallen <w7el@eznec.com> wrote:
> > I've had the opposite experience, and have found 40 meters great for
> > daytime QRP. But it's been on CW. On 40 meters during the day, you'll

> > hear stations from a radius of around 600 - 700 miles and under.
> Signals
> > are a bit weak, but steady. I find signal levels to be fine for CW
> QRP,
> > but they might be marginal for SSB. Also, a vertical antenna is a poor
> > choice for this range. A horizontal antenna up between 1/4 and 1/2
> > wavelength is much better. So for SSB mobile operation, daytime 40 is
> > probably not the best choice. It's fine for fixed CW operation,
> though,
> > unless you live where there are very few stations within a few hundred
> > miles.
> >
> > Roy Lewallen, W7EL
> >
> > xpyttl wrote:
> > >
> > > George Spear AA1PD wrote in message <8bm7dpaev1@nnrp1.deja.com>...
> > > >contacts would be easier during the day on 40 rather than 20. It
> was
> > > >not clear why the guy posting felt this was so but it has me
> wondering
> > > >if 20 or 40 would be the better daytime band. Any recommendations
> would
> > > >be appreciated.
> > >
> > > 40 is a tough band for QRP in the daytime - heck, it's pretty tough
> at
> > > night. From the mobile it's really rough in the daytime. My own
> experience
> > > is that 20 meter /QRP/M is a blast. And the Hamstick is one dandy
> antenna
> > > for it!
> > >
> > > 72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
> > > didileydadidah QRP-L #1446 Code Warriors #35
> >
> --
> George Spear
> AA1PD
> aa1pd@yahoo.com
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

--
If your address book lists my address as w7el@teleport.com,
please change it to w7el@eznec.com. My web site URL, formerly
www.teleport.com/~w7el, is now http://www.eznec.com.

2577. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38dfe790.9921173@news.eunet.yu>
Source record: 61982
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2578. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Mark Mallory <mark560@earthlink.net>
Message-ID: <38DFF02D.D162AC9D@earthlink.net>
Source record: 61983
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist wrote:
> Or perhaps you've misunderstood the nature of the
> "energy-sucking antenna effect" I've been talking
> about. It's certainly no perpetual motion machine.

Just what is the point behind this so-called "energy sucking" nonsense? There doesn't seem to be unusual behavior described here at all. The examples given here and on the website illustrate nothing more than basic principles of impedance matching, and their use in maximizing power transfer.

> I don't quite understand why folks here have such
> a problem believing that this can work (especially
> when others here have posted material from texts
> on antenna theory which show that the idea is
> nothing exotic.)

Just HOW exactly is it supposed to work? The claims you are making are rather vague. Exactly HOW MUCH power do you claim a small, lossless, resonant antenna can extract from a given propagating EM wave? (compared to say, the power available from a half-wave dipole.)

2579. FS!-RCA WO-91B Oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Steve <odin@webspan.net>
Message-ID: <sdvspu31lul33@corp.supernews.com>
Source record: 61984
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Boat Anchor class, ALL tube O-Scope. No Probes or Manual. Could probably use Calibration & Control Cleanup due to it's age. Overall in Good shape cosmetically & electrically. $50.00 plus shipping from N.Y. City. The CRT alone is probably worth the price.

TNX

Steve

2580. Free power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: "R. Alfred Whiting" <gdwhiting@erols.com>
Message-ID: <8bov83$56q$1@bob.news.rcn.net>
Source record: 61985

I have a 28v 7 ampere power supply. The price is $0. Pick up in the Washington DC (Silver Spring, MD) area.

Al k3BRS

2581. Constant voltage transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: "R. Alfred Whiting" <gdwhiting@erols.com>
Message-ID: <8bov83$56q$2@bob.news.rcn.net>
Source record: 61986

I have a Solar 60VA . It is available free for pickup in the Silver Spring MD area.

al k3BRS

2582. Re: SB-401 Relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <sjUD4.571$NZ1.57070@nntp0.chicago.il.ameritech.net>
Source record: 61987
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi All,
I have found two of the relays.

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

Jeff Weinberg W8CQ <w8cqjeff@ameritech.net> wrote in message
news:6sAD4.422$NZ1.39893@nntp0.chicago.il.ameritech.net...
> Hi All,
> I need a relay RL1 for the SB-401. It is the 5-pole DT relay, Heathkit
part
> #69-40. Used or surplus is OK.
>
> Can anyone help?
>
> Thanks,
> --
> Jeff Weinberg W8CQ
> w8cqjeff@ameritech.net
>
>
>

2583. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8bp3s70qve@news1.newsguy.com>
Source record: 61988

hehe - funny how we all have different experiences.

I've never had much luck on 40 - noise level mostly too frustrating, especially during the day and especially at this point in the sunspot cycle.

Also, when you said QRP, I sort of assumed CW. Seems like all the phone stations on 20 are running a kilowatt, so 20 phone is generally not the place a QRPer wants to be.

But, I do find CW mobile a bit of a challenge unless I have someone in the car to take notes, or unless I already know the other party so the name, call, etc. is already etched into the brain. Roy's memorable QSO reminded me of one of my favorites, which absolutely runs against what I just said!

Anyway, a couple of my teams are about 120 miles away, and I generally try to pack the rig when I go down to visit them. One trip last year I was coming home late in the afternoon and was listening around the phone band when I heard a PA3 calling CQ. Well, I gave him a yell with my mighty 3 watts into the Hamstick and to my surprise, he came right back. We had quite a nice chat across the pond - he gave me a 56 which was probably generous. It sure shortened the drive home :-))

THat was probably my last SSB mobile contact - as much fun as it was, I really dislike phone! From the mobile, my 40 meter attempts are more often than not the QRP-L fox, which is a challenge from the fixed station, so my dislike of 40m mobile may be a tad prejudiced. But while I have often had a hard time coming up with a Q on 40, I've never had a problem on 20. Obviously, Roy and I are just different! I'm sure you're different too, and will find your experiences different than either of ours.

72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
didileydadidah QRP-L #1446 Code Warriors #35

2584. Re: Advice on use/charging NiMH batteries?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: ssparky <ssparky2@thegrid.net>
Message-ID: <%DWD4.14576$84.1568527@alfalfa.thegrid.net>
Source record: 61989

Slow charging is fine, you need a GOOD fast charger made specifically for the metal batteries. THE WRONG TYPE OF CHARGER WILL EXPLODE YOUR BATTERIES!!! Ray-o-Vac makes a charger for AA, C and D size batts. It'll charge niCads, metal, and all alkalines-including standard types. It's around $20.00 at places like wal-Mart and K-mart.

> I just picked up 18 AA size NiMH batteries on Ebay. Can these be charged in the
> same way that I charge my Nicads?
>
> Thanks es 73
> Lee - KN4VN

2585. 2 pin mic plug source?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-27 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38E009F3.586E1197@pa.net>
Source record: 61990

Does anyone have a source for the two pin mic plugs such as are used on Johnson transmitters? Info on where they can be obtained would be most appreciated.

TIA
Art

2586. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e0a20.76q.root@radioactivex.lebesque-al.net>
Source record: 61895
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

A distraacted Science Hobbyist made these comments concerning
>Re: DOH! My big "energy sucking" error!:
>
> The cure is to READ messages, and not to assume
> that they mean anything else than they state.

Yes, it is. I've addressed every facet of your antenna with
halliday & resnick level physics, and so far, no one, yourself
included, has pointed out an error or inconsistency in what
I've posted. In fact, most of the other posts are consistent
with what I've posted. Your concept of "loosely coupled",
but not by anything that matters or has any properties like
capacitance lacks a certain physical basis and is not needed
anyway.

>
> Certainly! If two resonant antennas were within
> each others' nearfield region, then they would no
> longer act as separate devices, and only a single
> "antenna" would exist. The only energy available
> for reception is the energy emitted by the distant
> transmitter.
>
So, would you like to provide a qualitative description of the
process that doesn't involve the effect of the capacitance in
altering the efficiency and why the addition "professorial
knucklewraps" of the "size" and "energy sucking" song and
dance fix this?

> Things are still weird here. If one person insists
> that small resonant antennas violate physical law,

No one claims a resonant antenna violates any known
physical law. It's only your concept of what a resonant
antenna has to be and how you think it works that
violates any physical laws.

> and others insist that antenna textbooks describe
> this type of antenna and always have... doesn't it
> mean that the people objecting to the existence of
> small resonant antennas are WRONG?
>
It does if you take useful semantics that facilitate
engineering decisions by providing rules of thumb and
use those semantics as a basis for a fundamental

picture of the process. You'll have to call it the
Energy theory of the rules of thumb sucking.

> defenses. If I was talking about "perpetual motion
> machines", then I would SAY the words "perpetual
> motion". Over and over, so there would be no
> mistake.

Not if it's an inescapable consequnce of what you are suggesting.
Just because you don't realize it, doesn't necessarily mean you
have an option about perpetual motion. However, by this point,
I haven't the faintest idea which of the previous possible
variations on the theme constitutes the embodiment of the "
energy sucking antenna" or your idea of how it works. I can
safely say an antenna that works, doesn't violate physical law.
The same cannot be said for your explanation of how it works.
If an antenna works and your explanation gives physics the
short end of the stick, My objection have nothing to do with
the antenna.

> It sounds like the main problem here is hatred.
> If I am a disgusting pseudoscientist, then nobody
> can trust a word that I say, and if I say "energy-
> sucking is a part of conventional physics", people

No. The main problem is that you refuse to address any objections,
which I've made point-by-point just to make it simple and others
have made. Instead, you just keep asking for objections. I'm sorry,
but no matter how flawed an idea, how wrong a concept, there are only
a finite number of objections that are possible without repetition.
If your plan is to ignore objections until all possible objections
have been ignored and then claim you already dealt with the
now ineveitable repetition, buy a vowel

> either ignore it, or for some reason they imagine
> that I'm REALLY saying something about perpetual
> motion machines. Under these conditions,
> understanding is clouded by hatred, and discussion
> becomes impossible.
>
> I could say "Ohm's law is very useful", and sundry
> people would attack, and try to prove that Ohm's
> law violates physical law. It's ridiculous.

It does if you take it out of context. Try explaining how
you get charge moving at a constant velocity by applying
an electric field, since a = qE/m, not v. Without the
help of statistical mechanics, it isn't obvious that
V= IR (J = \sigma E);

2587. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e0c7h.76q.root@radioactivex.lebesque-al.net>
Source record: 61896
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

A distraacted Science Hobbyist made these comments concerning
>Re: DOH! My big "energy sucking" error!:

> You believe I'm talking theory here, not experiment?
> You assume that Dr. Jefimenko's "sky-powered" motors
> were a hoax or something? You're in for a suprise.
>
No. I just dont see the mystery. I'll bet you spend
more energy than you can get returned is all.

> charge from the "antenna," which flowed through the
> motor and into ground. It did not simply run for a
> brief time as the balloon lifted the wire. These sky-
> powered motors are well-known to atmospheric

So, as soon as it starts, you can wind up the wire and
go home? That's your claim? I sort of assumed the balloon
and wire had to remain connected to the motor with the
balloon remaining aloft.

> e-field drives a weak vertical ion flow. Any tall
> metallic structure will intercept a part of this current,
> and if that structure is insulated from contact with the
> ground, a small electrical load can be connected to it.

Now, what is the result if the charge decreased drastically
because the entire planet figured it was cheap energy?
Or hasnt it occured to you that there's no energy freebie?

> discharge which provides more ions and locally reduces
> the atmospheric conductivity above the metal structure.
>
I dont care what you do, the energy comes from somwhere
and like it or not, something has to provide the
energy to remove. Remove enough charge and you'll
find out where.

> Since Dr. Jefimenko claimed to have measured up to
> 1/16 HP, the output of his "DC antenna" might have
> been a few hundred microamps at a few kilovolts.
>
So what? A potential difference is just that. I dont
need a balloon to use a battery, but I'm not claiming
anything special about the battery and certainly just
because I didn't put the atoms together inside,

doesnt mean I have to remain ignorant of the energy
source. sheesh...

> be fun toys, but you can't run the country using
> this energy source.
>
Then why the hoopla? You just claimed earlier that
it was a great energy source to tap. If it's less
efficient than a coal plant, why did you spend
the entire post, except for this paragrapgh
disputing me. Did you expect to surprise me?
Now, why dont you explain why it's impractical,
so you can discover it's what I told you in the
post you just disputed. Do you use a markov
chain news reader that assembles posts from
word content in the entire group, or is deliberate
misunderstanding just a tool to try and wear down
the readers?

> Or, if you confront an actual electrostatic motor
> which is actually running continuously while
> connected to a long vertical wire, it means that your
> understanding of the physics behind it has a major
> hole somewhere.
>

I dont believe I've ever encountered someone that deliberately
misunderstaands at every opportunity just to insure no information
ever flows in. Is there some advantage to mis-stating what
someone tells you just so you aren't stuck arguing with yourself?

2588. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: K3FDY <edek@mail.gcnet.net>
Message-ID: <gVXD4.373$ZH4.21479@typhoon1.gnilink.net>
Source record: 61897

Wow, thanks guys, I think that I have enough to get me started here.
The loop ckt. submitted by "CA" is interesting, plus the amp. uses the
venerable MPF102, my speed! I wonder if this kind of continuous,
single-turn, amplified loop isn't what "Wellbrook" uses, or would it
possibly need to be a low-Q, center-tuned loop to attain the upper bands at
one meter diameter? Plus, I wonder why they, or someone else, didn't just
go for the convenience of the E-field probes instead of the cumbersome loop?
Thanks agn., Ed W.

Tom Bruhns wrote in message <38DFD3CF.DF94AC2A@agilent.com>...
>That's just the one I was thinking of in my other followup in this
>thread. Thanks! I'm glad some people have good filing systems! ;-)
>
>Cheers,
>Tom
>
>
>bertram wrote:
>>
>> Here's a link to a similar, much cheaper idea than I mentioned earlier.
The
>> MAX436 isn't cheap, and the article that was in Electronics Design
>> [10/23/97 or 7/22/96] hasn't been e-booked, to my knowledge.
>>
>> http://www.elecdesign.com/magazine/1998/dec1498/ifd/1214id.shtml

2589. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <WKXD4.5117$6S6.1262234@tw11.nn.bcandid.com>
Source record: 61898

"Roy Lewallen" <w7el@eznec.com> wrote in message
news:38DFE629.D370D8A@eznec.com...
> I assure you, the antenna I was using really sucked. But it was good
> enough.
>
> Roy Lewallen, W7EL

Roy, was this one of those "energy-sucking" antennas we've been reading
about?

-- Carl WS7L

2590. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <XKXD4.5118$6S6.1262436@tw11.nn.bcandid.com>
Source record: 61899

Great summary, Tom. Funny, the speedometer analogy was the same one that occurred to me.

I agree with you that an SWR meter measures SWR -- some more accurately than others. If you want better, look into a network analyzer or a vector impedance meter. You'll be able to measure SWR with far greater accuracy than you can with ham equipment. But you won't find them for $100 or $200. They're more like $20,000 - $30,000 and up. And you can't transmit through them.

Tom's employer will be happy to sell a very nice one to you.

-- Carl WS7L

"Tom Bruhns" <tom_bruhns@agilent.com> wrote in message news:38DFCF9B.46F9DB64@agilent.com...
> Saying it's not really an SWR meter is, to me,
> like saying the speedometer in a car is really not a speedometer: it
> can be miscalibrated, and you might use it to measure the speed when the
> car is up on blocks with the wheels spinning.

2591. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <YKXD4.5119$6S6.1262534@tw11.nn.bcandid.com>
Source record: 61900

"Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
news:8boq3i$b9s$1@plutonium.btinternet.com...
> How accurate is your S-meter or SWR meter?
>
> +/- 50 percent ? Which is a typical value of uncertainty.

Reg, you're being a bit pessimistic. Here are a few measurements made on
some odd resistors lying around the shop, made at 5 MHz with my Autek VA1
analyzer.

R SWR Meas SWR Calc % error
7.5 5.5 6.67 -17.5%
10 4.1 5.00 -18.0%
15 2.9 3.33 -13.0%
22 2.2 2.27 -3.2%
47 1.02 1.06 -4.1%
68 1.4 1.36 2.9%
150 3.0 3.00 0.0%
270 5.3 5.40 -1.9%
390 7.8 7.80 0.0%
500 10.1 10.00 1.0%

> But don't worry about it. The fellow at the other end will be unable
> to detect any difference in your signals anyway.

As the late US Senator Everett Dirksen would have said, "A dB here, a dB
there, and pretty soon you're talking about real power."

> --
> Regards, Reg.
>
>

73, Carl WS7L

2592. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38E06C22.136D371F@nospam.gecm.com>
Source record: 61901
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:

> I run a huge website on Amateur Science, but also one on
> Crackpot Science. I can't make head nor tail of the conversation.
> We crackpots count Goddard and the Wright Brothers among our number.

The Wright brothers have a lot to answer for. Why are they always there
when dubious inventions are being pushed before a skeptical audience?

>

2593. Help with Vector Voltmeter measurements

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: ozemail news <dhuisman@ozemail.com.au>
Message-ID: <q8%D4.58021$3b6.229318@ozemail.com.au>
Source record: 61902
Cross-posted to: aus.radio.amateur.digital,aus.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.design,sci.electronics.equipment

Would someone please point me in the right direction to find application notes regarding use of Vector voltmeter and Directional coupler for performing antenna Impedance, SWR and Return Loss measurements and any calcs required to convert A and B channel phase and magnitude to these quantities ?

Regards
David Huisman
david.huisman@advminingtech.com.au

2594. Homebrew Radio projects, AM & FM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: ������ ������ <thalassa@x-treme.gr>
Message-ID: <8bqffk$9a6$1@newssrv.otenet.gr>
Source record: 61903

At
http://www.freeyellow.com/members7/gearloose/free.htm
http://www.freeyellow.com/members7/gearloose/fmtx.htm
http://www.freeyellow.com/members7/gearloose/amxt.htm

Regards
Christos Konstas

2595. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38e0b284.5519813@news.eunet.yu>
Source record: 61904
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2596. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38E0CA64.1EFFCCE6@nospam.gecm.com>
Source record: 61905
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

" A. Scott Chesnick" wrote:

> Hello all,
> I found this in the Washington Post yesterday.
>
> This seems to fit in well with the rants and raves of the recent thread
> and violating the regular laws of physics in the least time.
>
> Does anyone know anything else about this?

Yes: it sucks!

2597. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38E0CA34.90E7CDCF@mmm.com>
Source record: 61906
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:

> And I've never deeply understood the operation of
> those tuned-primary, tuned-secondary transformers used
> interstage in transmitters. Aren't they just bandpass
> filters? Apparently not.

They also perform impedance transformation.

Opinions expressed herein are my own and may not represent those of my employer.

2598. Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Larry Benko <benko@aztek-eng.com>
Message-ID: <38E0D9BD.6EF77EF1@aztek-eng.com>
Source record: 61907

I am planning on doing Field Day this year with my
Icom-756 transceiver running from some large deep
discharge 12V batteries that I have. In the process
of measuring power requirements etc. I have noticed
that the transceiver outputs 100w (to a dummy load)
only for input voltages greater than 12.9V. For
lower voltages the power progressively is reduced and
for voltages less than 11.0V it shuts off. Clearly
this is acceptable for a situation where batteries are
being charged but when running off the batteries only,
the transceiver does not allow for the batteries to be
discharged very far before shutting down.

Enough for the history. Has anyone ever seen a device to
take a battery feet and boost the voltage a few volts?
This device would need to function for current draws of 20A
and be able to disable itself if the battery was being
charged since the transceiver has a maximum input voltage
of 16V. Conceptually this device could be an isolated 0 to
3V 20A supply that could be placed in series with the actual
battery and thus would be a much smaller device.

Thank and 73,
Larry Benko, W0QE

2599. Re: Help with Vector Voltmeter measurements

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <38e0d92a.41552895@news.azstarnet.com>
Source record: 61908
Cross-posted to: aus.radio.amateur.digital,aus.radio.amateur.misc,rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,sci.electronics.basics,sci.electronics.design,sci.electronics.equipment

On Tue, 28 Mar 2000 19:43:08 +1000, "ozemail news" <dhuisman@ozemail.com.au>
wrote:

>Would someone please point me in the right direction to find application
>notes regarding use of Vector voltmeter and Directional coupler for
>performing antenna Impedance, SWR and Return Loss measurements and any calcs
>required to convert A and B channel phase and magnitude to these quantities
>?
>
>Regards
>David Huisman
>david.huisman@advminingtech.com.au
>
>
>
Now you've done it! I know that I have a copy somewhere of "Measurement of
Complex Impedance, 1-1000 MHz" H-P App note 77-4, but I'll be damned if I can
find it at the moment.

That's what you want, however.

I'll keep looking.

Wes N7WS

2600. 5 watt SolarPanels 15v.out 300mA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: meshach <meshach@netcom.ca>
Message-ID: <3D5E4.17852$Xk2.73316@tor-nn1.netcom.ca>
Source record: 61909

I have a large number of 5 watt solar panels for sale. They are 12X12
inches. Amorphous type (made on glass). In direct sun they produce 20volts
no load, 330mA into a short and about 200-300 at 12 to 15 volts.
$30.00 each. Wires are attached, red and black. No frame, just the
glass panel but they are water proof.
I'm in Canada so I'm not sure about shipping.
Email me for picture or more info.

2601. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <954233577.1220973165@news.indigo.ie>
Source record: 61910

George AA1PD wrote:
> I just had a contact yesterday
>from home with a fellow who had just built a 330mW Gsprat TX. We QSO'd
>for 30 minutes with no problems except chasing him as he drifted. I am
>in maine and he was in NJ. But I was using a windom at 50 feet.
>

I'm wandering off topic but what is the record for a qrp contact?
Last night I worked W3ORU. He gave me a 519 report
for my 10mW signal. Thats about 480,000 KM per Watt !!!
We failed to make contact with 2.5mW.

Band 10M, Rig HB, Ant 80M dipole with 600 Ohm balanced feeder.

73, Ed. EI9GQ. Cork, Ireland.

--
Remove 'X' to reply by e-mail.

2602. Re: Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <226E4.39687$oc.874954@news5.giganews.com>
Source record: 61911

It appears that there is something wrong with the transceiver. Check the specifications and it probably says that it will put out 100 Watts over the entire acceptable supply range.

You may have a defective internal regulator. How are you measuring the supply? If you are measuring at the battery there may be some drop to the transceiver.

73, Bob K6DDX

2603. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2803001257350001@dialup-104.hip.cam.org>
Source record: 61912

In article <38DE7D50.EEF0DAF0@erols.com>, willi6@erols.com wrote:

> I vote with the larger cap (100pF) as the Main Tuning control. You did not
> mention if the 5:1 Reduction drive was part of a vernier dial assembly, or
> just the reduction drive. I "modified" an Ocean Hopper some time back (40
> years?) with a vernier dial with a healthy ratio. That allowed me to "log"
> my settings for subsequent retunes - difficult with the standard 0-100
> dial. The added benefit was that I seldom had to use the fine tuning as
> the vernier had the same tuning ability. It did allow me to set on my XTAL
> freq and then tune either side a few KCs.
>
> 73, Dave - K7HMP
>

I'd put the reduction drive on the main capacitor too.

But in some ways, which it goes on may depend on how the capacitors are intended to be used.

There was a time when a lot of receivers had two tuning capacitors, and two dials. One was main tuning, and the other was bandspread. You could tune with the main dial, but calibration was limited and it didn't take all that many turns of the knob to tune across the dial, and if it was a general coverage receiver and you were tuning the ham bands the problem was even more obvious. So instead, you'd tune the main dial to a certain point, and use the bandspread. Sometimes the bandspread dial had only a logging scale, and sometimes it was calibrated for the ham bands or even shortwave broadcast bands. If it was calibrated, you'd have to set the main dial to a specific point, but of course you could ingore the calibration and just tune the main dial to near where you wanted to tune.

But one could also have a situation where the main dial covers a smaller segment of the spectrum, such as a ham band, and the second capacitor is only fine tuning. The main tuning has to be relatively good, and the fact that it covers a small segment makes that easier. But the fine tuning is only there to make very small tuning adjustments, of a few KHz or so either way.

In the former, you'd want the reduction drive on the bandspread capacitor, though you'd probably also want something on the main capacitor.

In the latter case, the reduction would be on the main drive, and the fine tuning is really like additional reduction on the main tuning.

With a regen with plug in coils, one could set up things both ways, though the reduction drive would have to be on one capacitor, the main one. You

could have a set of coils that cover the full 2-30MHx spectrum, if that's what you want, but then have a second set of coils that have parallel capacitors that reduce the effect of the tuning capacitors and thus their tuning range.

One can also look for tuning capacitors with 2:1 reduction drives built in. I've seen quite a few of those in consumer am/fm radios, at least in more recent equipment that actually uses variables with air spacing rather than mylar. If you had something like that, it might give reconsideration to putting the reduction drive on the bandspread capacitor, if you were using the second capacitor for bandspread rather than fine tuning.

If one is using the second capacitor for fine tuning, one can limit it's range by putting a capacitor in series with it, to make it in effect a smaller variable.

Another trick for easy tuning is to use large knobs.

And I've seen people suggest plastic protractors as ready made logging scales.

Michael VE2BVW

>
>
> paulygman@my-deja.com wrote:
>
> > I am building a small one tube regenerative reciever. The tuning
> > circuit calls for two variable capacitors hooked up in paralel a 15 pfd
> > and a 100 pfd. Which is the bandset and which is the bandspread
> > variable capacitor? I have a 5 to 1 reduction drive dial, which
> > capacitor do I put it on?
> > Paul G
> > in New Jersey
> >
> > Sent via Deja.com http://www.deja.com/
> > Before you buy.

2604. Re: Free power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8br18f$94l$1@plutonium.btinternet.com>
Source record: 61913

Al, very generous of you. What a pity it can't be downloaded from your website.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
R. Alfred Whiting <gdwhiting@erols.com> wrote in message news:8bov83$56q$1@bob.news.rcn.net...
> I have a 28v 7 ampere power supply. The price is $0. Pick up in the
> Washington DC (Silver Spring, MD) area.
>
> Al k3BRS
>
>

2605. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8br0s2$8fp$1@plutonium.btinternet.com>
Source record: 61914

Hi Carl,

I also have an Autek antenna analyser. It's a very nice and convenient instrument. I can confirm the measuring accuracy. Thanks very much for your trouble to make the tests and publish your findings.

But the Autek is not an in-line SWR measuring device.

The ordinary SWR meter at 30 MHz only tells you whether you are likely to blow up your PA or not. It also keeps the CB swwrrrr fraternity happy.

Have you noticed not a single manufacturer specifies the measuring accuracy of his ordinary SWR meters. They don't even bother to state the reference impedance. Why don't they ? Simple, they don't have even the foggiest idea !

But most amateurs take SWR meters as telling the Gospel truth. Not that it matters very much anyway.
--
Regards, Reg.

2606. Re: Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <38E10C97.AF9A237@NOSPAMwcom.com>
Source record: 61915

I heard of this situation before, not just with ICOM's. The only fix I have heard of is to add cells, which near impossible to do, then regulate it down. I don't know if they are available but placing in series a 6V deep cycle battery then building a regulator to drop the voltage back down to a desired level (13.8V). Beware, the fully charged batteries could be as high as 22.5V. Between the voltage and the amount of power you will be dropping a linear regulator will be generating a lot of heat (9V X 20 A(peak) = 180W). Even a partiality discharged you could be dropping a 100W (5V X 20A (peak)). A switching regulator may be preferred.

A DC to DC inverter are generally not very efficient and high power versions are expensive. Also, although I could be wrong, all of the one I have seen are unregulated.

2607. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38E10CE6.38A26843@sympatico.ca>
Source record: 61916

Nick Caruso wrote:
>
> I've got a couple of 100 ohm 1% noninductive resistors which claim to be rated
> at 20 W each. I was thinking of paralleling them and building a dummy load.
>
> My question: how much power can such a thing handle, continuously? I imagine
> it could tolerate 40 W intermittently, but how much should I derate it for
> continuous use? 50%? 70%?
> (snip...)

Since the resistors were designed to be bolted to a heatsink - achieving
their rated dissipation may in fact require this - why not do so? You
can
buy really big heatsinks cheap, and they're far less mess than things
with
oil in them...
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

2608. Re: wtb:sockets for 4x150g tube [8172]

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8br56aooj1@nnrp1.deja.com>
Source record: 61917
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.swap

In article <38DFCB00.76B8@mad.scientist.com>,
webmonkey@mad.scientist.com wrote:
> anyone have any of these critters around?
>
> 4x150g/8172 tubes need some sockets.
>
> thanks for your time
> --
> A.C. Curtis
> KB WLF - owner operator of the mighty 45 multicast repeater system
> 53.45 and 442.45, 77.0Hz enc/dec, hf/2m remote base
> mailto:demoman@rollanet.org
> http://www.rollanet.org/~demoman
>

The socket is a SK2A type. It can be found with RF Parts at
www.rfparts.com/sockets.html
or with Svetlana at http://www.svetlana.com/docs/tubeframe.html
or at http://www.surplusales.com/Tubes-Sock-Acc/TubeSktsmain.html (much
cheaper)
--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2609. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <38E11F82.13689B7F@software.com>
Source record: 61918

Reg Edwards wrote:

> How accurate is your S-meter or SWR meter?
>
> +/- 50 percent ? Which is a typical value of uncertainty.

It's an SWR/antenna analyzer something like the Autek Research unit:

http://www.mfjenterprises.com/analyzers/mfj259.html

The resistor was a 1% 100 Ohm unit, and the meter read 2:1, 100 ohms, up to about 15 MHz. My benchtop multimeter showed the resistance to be fractionally over 100 ohms, well within the 1% tolerance of the resistor's specification.

> But don't worry about it. The fellow at the other end will be unable
> to detect any difference in your signals anyway.

:-)

best regards,

ncc kb1dej

2610. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <38E12402.2781E494@my-deja.com>
Source record: 61919

paulygman@my-deja.com wrote:

> I am building a small one tube regenerative reciever. The tuning
> circuit calls for two variable capacitors hooked up in paralel
> a 15 pfd and a 100 pfd. Which is the bandset and which is the
> bandspread variable capacitor? I have a 5 to 1 reduction drive
> dial, which capacitor do I put it on?
> Paul G
> in New Jersey
>

Paul,

This is a very common arrangement for general coverage type receivers.

The "bandset" is for gross tuning. The receiver might have a large overall coverage. A unit might cover, for example, 6 to 19 MHz, which is popular for receiving Short Wave Broadcasts. Within this range there are "bands" where certain types of broadcasts tend to be clustered. There are many, but as an example there is the 49 Meter Band (6.0 - 6.5 MHz), for Short Wave Broadcasts, 40 Meters (7.0 - 7.5 MHz), for Amateur communication and Short Wave Broadcasts, etc..

The "bandspread" is then for fine tuning. If you use your "bandset" control to select your band of interest, say 40 Meters, you can then use your "bandspread" control to "spread" out the "band" over the larger portion of the dial, than if you only had the "bandset" to work with.

Using this as a guide, the 100 pF capacitor will produce a change in capacitance larger than the 15 pF capacitor, for the same amount of movement. In other words, if you were to turn the shaft 10 degrees, the 100 pF capacitor may show a change of 15 pF, whereas the 15 pF capacitor might only show a change of 2 pF.

If you then relate this to your tuning circuit, a 15 pF change in capacitance will cause a greater change in frequency than a 2 pF change. Therefore, the 100 pF capacitor would be your "bandset", or gross tuning, and the 15 pF capacitor would be your "bandspead", or fine tuning.

The 100 pF capacitor would be "setting" your "band" of operation, and the 15 pF would be "spreading" the "band" over a large portion of it's dial.

In operation you might set your "bandspread" for maximum capacitance, which is with the plates fully meshed, and then adjust the "bandset" to the bottom of your band of interest. Then, rotating the "bandspread" capacitor will allow you to fine tune the band of interest, from the low end to the high end. You can also do it in the other direction. Setting your "bandspread" control for minimum capacitance and then useing the "bandset" to set the top of your band of interest, would accomplish the same thing.

If you were using this receiver with a transmitter, it might be better to set the "bandspread" control at mid-range. Then use the "bandset" to zero-beat your transmitting frequency. This would then allow you to fine tune the receiver above and below your operating frequency by just using the "bandspread" control.

As to which control gets the 5:1 reduction drive, well this has to do with resolution. The "bandspread" capacitor is small and will change capacitance at a rate much slower than the "bandset" capacitor, for the same amount of rotation. For 10 degrees of rotation the "bandset" capacitor might change 5 pf causing a 135 KHz shift in tuning. On the other hand, the "bandspread" capacitor might only change 0.75 pF causing a 20KHz shift in tuning.

You may think that this is tending to say that the reduction drive should be put on the "bandspread" capacitor, because you can then reduce the frequency shift by a factor of 5 for the same 10 degrees. This would then take the above shift of 20 KHz and reduce it to 4 KHz. A much smaller increment and a much finer tuning capability.

But, then you have to ask yourself if the resolution with which you can set the "bandset" capacitor is sufficient to allow you to set it within 4 KHz of the frequency of interest. In the above scenario, it would be very difficult to reliably adjust the "bandset" control to a particular 4 KHz segment. However, with the reduction drive on the "bandset" control the 135 KHz/10 degrees shift would be reduced to 27 KHz/10 degrees, making it relatively easy to adjust your "bandset" to whatever band you wish.

In summary, the 5:1 reduction drive belongs on the "bandset" capacitor (100 pF). You could also put one on the "bandspread" but there would be little gain. I would be better just to get a larger knob.

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my responses may not be as timely as you, or I, would like them to be. If

I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

2611. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8br9k5016st@news2.newsguy.com>
Source record: 61920

I don't know what the record is, but I think QRP ARCI has a million mile per watt award that several people have snatched.

Even further off topic - are you planning to go to Celticon? I haven't made my reservations yet but am planning on being there. I don't know ANY of the G/EI crowd, but I expect it will be fun anyway.

72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
didileydadidah QRP-L #1446 Code Warriors #35

E. Skelton wrote in message <954233577.1220973165@news.indigo.ie>...
George AA1PD wrote:
> I just had a contact yesterday
>from home with a fellow who had just built a 330mW Gsprat TX. We QSO'd
>for 30 minutes with no problems except chasing him as he drifted. I am
>in maine and he was in NJ. But I was using a windom at 50 feet.
>

I'm wandering off topic but what is the record for a qrp contact?
Last night I worked W3ORU. He gave me a 519 report
for my 10mW signal. Thats about 480,000 KM per Watt !!!
We failed to make contact with 2.5mW.

Band 10M, Rig HB, Ant 80M dipole with 600 Ohm balanced feeder.

73, Ed. EI9GQ. Cork, Ireland.

--
Remove 'X' to reply by e-mail.

2612. Re: Source of very flexible coax cable?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38E11039.97B6EB3C@valley.net>
Source record: 61921

Mark Nelson wrote:

> In designing a body-worn radio for a marathon runner, I need some VERY
> flexible (and small, of course) coax to connect the transceiver (on the
> waist) to a shoulder-mounted antenna. RG-174 in most of the forms
> familiar to me is too stiff, and would chafe the runner. Since the
> distance from radio to antenna isn't very long, I'm not worried about
> losses much (even at 900 MHz). WR Gore quoted me $500+ per assembly for
> their .047" coax with connectors -- I'm looking into the surplus bins at
> Hamfests as more appropriate to my budget. The radio will use a SMA
> connector.
>
> Can anyone point me to a source (new or surplus)?

Hello, Mark--

I wonder whether anyone in the NG is familiar with flexible coax cable for
biomedical applications? I'm not, but that's the direction I'd look.

A served (i.e., spiral-wound) shield may offer better flexibility, but it
makes
for a very leaky RF cable.

73,
Brad AA1IP

2613. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: g345cde@aol.com
Message-ID: <20000328175602.02490.00005131@ng-ca1.aol.com>
Source record: 61922

This guy contributes to the fact that there are more horses' asses in the world than there are horses. GHF
G345CDE

2614. Rocket DME/Telemetry...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Paul Breed <Paul@Rasdoc.com>
Message-ID: <38E14F98.24ED41D9@Rasdoc.com>
Source record: 61923

The group at:
http://www.space.com/space/launches/cats_launch_000328.html

Is trying to measure the altitude of a Rocket using GPS.
Normal non aerospace GPS receivers have a hard time handeling high GPS doppler rates
such as produced in the rocket.

I have no involvement with them at all.
I'm just a geek that was wondering if this is the best approach.
How hard would it be to measure the rocket position with a transmitting beacon on the Rocket?

My idea...
Put a beacon on the Rocket that transmits a short UHF CW pulse every second or so.
The duty cycle would be low enough to reduce average power.
(It could send a morse ID every 10 min to be legal)

Place 4 or more ground stations to recieve this pulse.

Use GPS to syncronize the clocks at the ground stations.
How hard would it be to measure the ariival time of the pulse with enough accuracy
to measure vertical distance?

Realize that the transmit time of the pulse is unknown, so we have four times of reception
to solve for 4 unknowns.

Rocket X,Y,Z and Time of Tx.
We can postprocess the individual GPS Rx clock offsets to know the different RX clock offsets to better than 100nsec.

How hard would it be to measure the arrival time of 70cm or 23cm pulse to better than 1 usec?
This would give an aproximate range measurment of +/- 900 ft.

How would you build the simplest pulse transmitter to do this?

How would you build a receiver to recieve the pulses.....
(Remember that the rocket can go Mach 3.5 so the doppler is not insiginificant.)
I was thinking a DC Rx tied to a reasonable gain Yagi.
The operational environment is out in the Black rock desert, so it should not be a high intermod environment on UHF.

Paul (Kl7JG)

2615. WTB: HP 11730A cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38E14CB0.3F32@pop.removethistomailme.net>
Source record: 61924

Looking for cable to connect 436A power meter to sensor.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2616. FS: Pair of 572B tubes - Brand New

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Jeff Weinberg W8CQ <w8cqjeff@ameritech.net>
Message-ID: <ajeE4.721$NZ1.85449@nntp0.chicago.il.ameritech.net>
Source record: 61925
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hi All,
I have a brand new set of 572B tubes for sale. These are the Chinese tubes, but perform perfectly. I took them out of the box to test in an SB-200 and were full output. I originally paid $35.00 each. I will sell the pair for $60.00 + shipping.

Thanks,
--
Jeff Weinberg W8CQ
w8cqjeff@ameritech.net

2617. Re: LM3900 - Obsolete

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <qWfE4.6981$vY4.13866@news4.mco>
Source record: 61926

Find out if the CA3140 is still in production, that is supposed to be a close, if not direct substitute.

WandrAngus <wandrangus@aol.com> wrote in message news:20000328224639.15531.00010174@ng-de1.aol.com...
> I just found out today that National Semiconductor is obsoleting my favorite
> op-amp - the LM3900. This was an unusual device, a Norton amplifier, with
> current-differentiating inputs which made is extremely easy to design complex
> active filters with. Stock up now, lads, while any inventory remains.
>
> 73 - KC3ZQ

2618. htx-10 adjustments

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38E141D7.8BFFAC35@pa.net>
Source record: 61927

Hi,

I couldn't find any information on the net on the various pots in the htx-10. So, I tinkered a bit and found;

RV1 = S meter adjust (50uV on AM for S9 makes a very scotch meter for SSB)
RV9 = Po adjustment for SSB (32W max on whistle up peaks)
RV16 = Po adjustment for FM and AM (32W max on FM. I set mine to 25W)
RV4 = max mic gain (I set this one for >100% positive peaks without going beyond 100% negative peaks on AM.)
The power output meter adjust is the one that is aft and to starboard of RV1. (I neglected to record the pot number. . .next time I take the cover off I'll report the RV number)

Note: I wasn't looking for a means of putting this rig on other bands and am not interested in doing so.
Note 2: There are a number of other pots on the board (RV11, 12, one in the center) that I would like to know about. I didn't see anything change when I tweaked them. Help would be appreciated. Heck, a schematic would be appreciated. . .

Art K3XF

2619. htx-10 ctcss

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <38E14678.A919D12F@pa.net>
Source record: 61928

I think I have found an undocumented feature for the htx-10.
Func 4 in FM caused the display to read RPT and a sub
audible tone at 88.5Hz is transmitted at about .5 KHz
deviation. . . . Kinda neat. . .
Art K3XF

2620. 2N3053 Replacement with better power dissipation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <kt2E4.3999$D7.98582@news.itd.umich.edu>
Source record: 61929
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi Groups:

I own a Ramsey QRP 30 meter CW rig and it's complement QRP AMP linear. I like the setup and
have made some nice CW contacts. With the rig alone I can get .4 W out. I decreased the value of the collector resistor in the driver circuit hoping to get a little more out of the transmitter. It worked and I got .5 Watts. But the 3053 final can't seem to keep up with the change.
Would anyone suggest multiple 2N3053's or another device capable of handling the power without producing so much heat?
I would like to find a replacement for the 2N3053 that would not heat up so much that the power drops. Is there a replacement that would handle more dissipation without so much heat? I did some looking and found a device with similar characteristics as the 3053 but with a higher power ratings. The 2N3553 looks somewhat similar. Anyone out there know of a replacement part with similar voltage/current/gain and hybrid parameters?
I forgot to mention the power output of the transmitter when attached to the QRP amp goes to 2 watts out the antenna! If I drive the QRP AMP to higher than this my AMP oscillates and goes into runaway. Talk about HOT transistors. But that is another subject..

Thanks and 73

Curtis Scholl
KG8SU

2621. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8boq3i$b9s$1@plutonium.btinternet.com>
Source record: 61991

How accurate is your S-meter or SWR meter?

+/- 50 percent ? Which is a typical value of uncertainty.

But don't worry about it. The fellow at the other end will be unable
to detect any difference in your signals anyway.
--
Regards, Reg.

2622. screwdriver antenna parts?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: kd5fxt@aol.com
Message-ID: <20000327212221.24354.00001373@ng-fh1.aol.com>
Source record: 61992

Ok, here is the deal. I have a hmbrw screwdriver antenna (which I didn't build). Some of the teeth on the brass? ring at the top are bent and broken. I need a new one. Where can I get one of these? Pse email with info.

Bill
KD5FXT

2623. Advice on use/charging NiMH batteries?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: l2jarvis@aol.com
Message-ID: <20000327213640.01954.00010560@ng-dc1.aol.com>
Source record: 61993

Hope this isn't a badly worn thread already.

I just picked up 18 AA size NiMH batteries on Ebay. Can these be charged in the same way that I charge my Nicads?

Thanks es 73
Lee - KN4VN

2624. Re: FS!-RCA WO-91B Oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-28 00:00:00 UTC
From: CMySig <tzr-v@DELETECAPSFIRSTprodigy.net>
Message-ID: <8bp7d5$c3cu$1@newssvr03-int.news.prodigy.com>
Source record: 61994
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Know anything else at all about it? (ie.. mghz?)
--
Greg
a/k/a
Tzr
Dad
Clone-Raiser
$#%@&^%*!!!

"Teazer" / 612
Runnin: RCI 2950's & Intek Tornado 4500
{ok, so - maybe - they get a 'lil' help] ;-]

}:::::: Beyond The Molecular ::::::{

datzr@DELETECAPSFIRSTyahoo.com
^^^^^^^^^^^^^^^^^

Steve <odin@webspan.net> wrote in message
news:sdvspu31lul33@corp.supernews.com...
> Boat Anchor class, ALL tube O-Scope. No Probes or Manual. Could probably
> use Calibration & Control Cleanup due to it's age. Overall in Good shape
> cosmetically & electrically. $50.00 plus shipping from N.Y. City. The CRT
> alone is probably worth the price.
>
> TNX
>
> Steve
>
>

2625. For you antenna nuts!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: RanHefner <ranhefner@my-deja.com>
Message-ID: <8btmldjrh1@nnrp1.deja.com>
Source record: 61745

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=295763132

--
Randy A. Hefner
http://members.xoom.com/qx3fun
http://clubs.yahoo.com/clubs/qx3

Sent via Deja.com http://www.deja.com/
Before you buy.

2626. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: CA <remove_sm6pxj@hotmail.com>
Message-ID: <Y%sE4.3487$w47.6565@nntpserver.swip.net>
Source record: 61746

Here's more:
http://www.computerpro.com/~lyle/bal-pre/bal-pre.htm

73
Christer
sm6pxj

2627. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38E25BEA.FD29BD1D@agilent.com>
Source record: 61747

Yeah, the two web references both look a whole lot more suitable for limited budget home construction than trying to do it with wide-band op amps. I would suggest putting back-to-back parallel diodes from each antenna terminal to ground, to protect against electrostatic discharges. ESD can degrade noisefigure of transistors without actually destroying them, and it would be good to keep the amplifier reasonably low noise.

Seems to me (as a circuit designer) that it would be fun to play with turning that amplifier stage into a bootstrapped cascode, which can reduce the input capacitance by a whole lot and also make for very low distortion.

I'm a little puzzled by your question starting, "I wonder why they...". In the circuit "CA" pointed to, the loop is optional. The primary configuration, as I read it, is a very short dipole.

Cheers,
Tom

K3FDY wrote:
>
> Wow, thanks guys, I think that I have enough to get me started here.
> The loop ckt. submitted by "CA" is interesting, plus the amp. uses the
> venerable MPF102, my speed! I wonder if this kind of continuous,
> single-turn, amplified loop isn't what "Wellbrook" uses, or would it
> possibly need to be a low-Q, center-tuned loop to attain the upper bands at
> one meter diameter? Plus, I wonder why they, or someone else, didn't just
> go for the convenience of the E-field probes instead of the cumbersome loop?
> Thanks agn., Ed W.
...

2628. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <954364385.11514499@news.indigo.ie>
Source record: 61748

"xpyttl" <xpyttl@earthling.net> wrote:
>I don't know what the record is, but I think QRP ARCI has a million mile per
>watt award that several people have snatched.

I Just worked W3ORU with 2.5mW. That breaks the million miles per watt barrier!

>Even further off topic - are you planning to go to Celticon? I haven't made
>my reservations yet but am planning on being there. I don't know ANY of the
>G/EI crowd, but I expect it will be fun anyway.

I think that will be in Dublin. I probably won't be there. Enjoy
your trip to EI. If you want to try some very low power QRP,
give me a call on 28.435 MHz at about 18:30Z, most days.

73, Ed. EI9GQ

--
Remove 'X' to reply by e-mail.

2629. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Nick Kennedy <nkennedy@tcainternet.com>
Message-ID: <se5fe9cqead70@corp.supernews.com>
Source record: 61749
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

"Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
news:8bsssssdi1@uranium.btinternet.com...
> In any real circuit there is resistance. When one
capacitor
> exponentially charges up from the other the 'lost' energy
is
> dissipated in the resistance.
>
> The loss is the same regardless of the resistance value.
The higher
> resistance values just take longer to do the job.
> --
> Reg.

Exactly right. I saw this little problem as a riddle in a ham magazine about 20 years ago. But the writer didn't give the answer to "where did the missing half of the energy go?" He just speculated that it may have been radiated.

The problem stuck in my head and I finally did the math. It turns out that all you need is plain old circuit theory--no radiation required. The interesting thing is, you can say, "let the resistance be arbitrarily small," and it doesn't matter--half the energy will be dissipated in the resistance.

73,

Nick, WA5BDU

2630. Re: Digital and RF down same coax cable.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <38E2CAC2.AC55447A@dialpoint.net>
Source record: 61750

I don't see why it would not work. Many devices send DC up the coax
with the RF.
Lots of time it is just a mater of adding a RF choke and maybe a
capacitor on each end.

Tom Turnbull wrote:
>
> Is it practical/possible to consider sending digital signals to rotate an
> antenna (say) up the same coax which connects the antenna to a receiver? Has
> this sort of thing been done?
>
> Tom.

2631. Re: HP Journal

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: ralph <crlane@erols.com>
Message-ID: <38E2CB14.9447BF6D@erols.com>
Source record: 61751

All I found was the index. Can you call up the actual journal?

Ralph

ac6v wrote:
>
> JW wrote:
>
> > If anyone cares, I just stumbled upon the website for HP Journal:
> > www.hp.com/hpj/search.html
> > Although it is mostly about plugging new HP products, there is always
> > good theory and applications. The index goes back to 1949.
>
> ==========
> It has changed URL's try:
> http://www.hp.com/hpj/journal.html
>
> --
> 73 from Rod in Oceanside, Ca
> ==
> AC6V INDEX TO DX AND HAM RADIO
> FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
> Over 580,000 Visits On The Counter
> http://www.ac6v.com - General Ham Pages
> http://www.ac6v.com/pagedx.html - DX Reference Pages

2632. Cushman CE-50 Repair Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Donald Smith <desmith@innercite.com>
Message-ID: <38E2EC1F.B70E8500@innercite.com>
Source record: 61752

I have just picked up a Cushman CE-50 that seems to have a bit of a problem. I cannot seem to receive a signal thru it even though the squelch seems to work. I also seem to be able to generate a signal OK and the modulation circuits seem fine. I have the manual but it doesn't seem to be very complete with the serviceing information. Can anybody help or point me in the right direction. Thanks Don KB6GQA Please respond via email.

2633. Licensing Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: heildg <heildg@my-deja.com>
Message-ID: <om94essd5eta3dhnkmhm76vua6rrqddjjp@4ax.com>
Source record: 61753

What level of license do I need to build a ham band R/C radio? This is all I ever envision using a amateur license for.

Thanks

2634. LM3900 - Obsolete

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: wandrangus@aol.com
Message-ID: <20000328224639.15531.00010174@ng-de1.aol.com>
Source record: 61930

I just found out today that National Semiconductor is obsoleting my favorite op-amp - the LM3900. This was an unusual device, a Norton amplifier, with current-differentiating inputs which made is extremely easy to design complex active filters with. Stock up now, lads, while any inventory remains.

73 - KC3ZQ

2635. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Mike <mike@nospam.com>
Message-ID: <fzgE4.129740$bm.456676@news1.alsv1.occa.home.com>
Source record: 61931
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

"Science Hobbyist" <bbeaty@microscan.com> wrote in message
news:8bhkf6$k7r$1@nnrp1.deja.com...
> In article <Kz3VOFHPDbG+apaj6vA3g+dbF0Nn@4ax.com>,
> John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
>
> [...]
>
> > There are a
> > number of simple 'paradoxes' (or 'miracles' if you are so inclined)
> > that recur in circuit theory. The persistant classic is the case of
> > two 1 farad capacitors, one charged to 2 volts, the other at zero.
>
> I'm well aware of that one. Physics teachers commonly
> use it as a trick question on final exams (for extra credit
> only, if their hearts are in the right place.)
>
> > What happens when they are paralleled? If both wind up at 1 volt, as
> > circuit theory predicts, then where did the energy go?
>
> It oscillates as a one-turn inductor with the two
> capacitors, and either heats the wires and capacitor
> dielectric, or if this is just a thought experiment,
> oscillates forever or perhaps radiates its energy away.

Okay, so what happens if my original capacitor was really two 1/2 farad
capacitors in parallel, and the way I got them charged to 2V was by
connecting them in parallel, and what if I had done that over and over
again...

In fact, there is no oscillation, no significant radiation, and no
significant heating. There is work done, of course, but why let this little
detail interfere with a brand new interpretation of physics?

-- M --

2636. Re: LM3900 - Obsolete

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <dBhE4.7143$vY4.14190@news4.mco>
Source record: 61932

CA3401, CA3401, CA3401
Dyslexia had struck the author of the previous entry in this string when he
mistakingly blurted out that the CA3140 was is a substitute for the noble
Norton amplifier, LM3900. Don't believe what that guy writes! Ever!
and besides, I don't know where to get any of these, either.

2637. Re: 1st project for young hams: move cheap walkie talkies to 6 meters AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: hwh <74361.2114@CompuServe.COM>
Message-ID: <8bs9qa$b0j$2@ssauraaa-i-1.production.compuserve.com>
Source record: 61933

> but when the old talkie was keyed up, a CB about
>20 feet away hits S9 on *any* channel. THAT's a bad signal!
Might also be worth giving the quality of the receiver some
investigation.
Wayne
WB4OGM

2638. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e3k1f.93j.root@radioactivex.lebesque-al.net>
Source record: 61934
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist said some stuff about

> simply an impedance mismatch. But when light hits a
> glass prism, the air/glass interface is a "nonlinear"
> step, even though the EM equations are still "linear."

How do you figure? The dielectric "constant" is not a
constant. It's only convenient to use it that way for most
things. It's actually an increasing function of frequency.

> (And in the case of an air/glass interface, WHERE
> exactly is the "step"? Isn't it spread out over
> 1/4 wavelength on either side of the interface?

In classical terms, yes. In light-is-aparticle terms,
the 1/e value at 1/4 wavelength is the same as the fractional
number of photons falling with that distance as determined
by the fractional area under the probability curve.
Pick a description. Dont mix them. For the millionth
time. While one can switch at will in principle, some
things just dont work as intuitively in both descriptions.
When uncertain, use what you know well enough to be correct.

> Think in terms of the evanscent waves in the air
> when light suffers internal reflection within glass.)
>

And the idea works so well, that quantum mechanics allows
tunneling while no classical wave picture will.
>
> Which one? The lossless coil?
>

How about using the outer capacitor to achieve the conditions
you want and then claiming it may be so far away and "loosely"
coupled as to be unimportant? That's like charging up an
electric car 6 hours every night and claiming the six
hours you arent driving the car cant affect its performaance
because you were sleeping and weren't anywhere near it.

> (Maybe I should have said 10KHz to make certain people
> knew it was in the nearfield? But look at the title of
> that article! NEARFIELD COUPLING AND TUNED CIRCUITS.)
>
It doesnt matter. 1Hz , 1Thz same thing, different scale
factor.

>
> Obviously. That's why that website is "nearfld1.html."
> That's why I instruct the reader to imagine that the plates
> are a couple of feet across while the 500KHz operating
> frequency is 600 meters.
>
nearfield == snakeoil.

> Now I don't understand. If I continually claim that
> "energy sucking" is entirely conventional, electrically-
> small resonators, and you now say that amateurs don't
> know that "energy sucking" exists (meaning, they don't
> know that electrically small antennas can gather significant
> energy if a resonator is added), then I can't make head nor
> tail of the conversation.
>

"Extremely difficult to calculate" but interpreted as
what you expect if you could, doesn't mean what you expect
will turn out to match the exact result if you ever manage
to calculate it. Otherwise, solving problems would be easy
since one always expects something.

If you're lost, then I certainly am. I've just rebutted
points you've made in detail. You haven't found anything
to show andy calculation is wrong, or any claims I've
made are wrong. But, feel free to do so in the context
that I made them. Since I can only guess how you plan
to leverage unqualified agreement with the assertions
on your page, I don't intend to have to stop and argue
about any assumptions that I connsider to be implicit.
That's why I provided explicit qualifications. If you
have to get an answer that would be wrong for some contrived
situtation, too bad.

> of thinking that, but if you read my posts, you'll see that
> this is a straw-man argument being used by others to argue

It would be a straw man only if it were obvious why your
description (not an actual antenna) shouldnt violate
conservation of energy. But, you haven't addressed it,
so I expect that's why you get so many questions about
it.

> against the importance of the electrically-small resonant
> antenna concept! It's really silly. To defeat the
> horrible crackpot who insists that this interesting effect
> is part of conventional EM, they attack some totally

OK. Prove your assertion. Calculate how much "suck" your
antenna gets. Then the result can be compared with the
old fashioned antenna. I'll of course have to do the

calculation the old-fashioned way - on my abacus.

> webpage, hang out on PHYS-L the college physics education
> forum, play "science guy" for the MADSCI project, and my
> passion in life is to construct physics explanations which
> can be understood even by grade school teachers. Hence
> all my non-math mental models and visual representations.
> For a REAL challenge in physics, try explaining it to your
> grandmother! There's an Einstein quote about that. For a
> sample of my work, see:

And if you cant answer my questions, which are not
even mathematical, then perhaps your explanations
are wrong. Simplicty is only useful if the simplification
doesnt obviate the resaon for making something simple.

At least you're consistent. Why is there an advantage to
replacing a perfectly inadequate explanation for something
with one that is also inadequate and somethimes unnecesarily
obtuse? In each of the sections below, and others, you've
offered an alternative explanation not one which is more
"correct". That's all well and good up to the point you
start making claims of correctness (Corrollary: if
you don't like nitpicking, don't nitpick unless you
pick all of the nits). Most people will never care not
miss much in life by not understanding physics to a minute
detail and for them, a reasonable physical picture of
what happens, for example during a head on collision,
is fine. In most cases, your explanations are fine. They
aren't necessarily better or worse than the ones you dislike
(some are, some aren't in my opinion), because you only
replace one vague term with a different one. That may
help some people. But, there is not a single explanation
that is fundamental. All of the items are phenomenological
and despite this, you treat them as being fundamental.

Hence the consistenct with this thread. You consider your
antenna "size" to be a fundamental property, but you wont
actually deal with its behaviour except in terms of
phenomonology. "Somehow the nearfield...." just doesnt
cut it. I can obtain any physically realizable result
your setup can produce without appealing to something
I cant explain. It may require thinking about it to
avoid self-delusion, but so far nothing you have attributed
to this antenna falls outside of halliday & resnick physics.

Feel free to not explain why the same results from
doing business as usual is somehow incorrect or please,
nitpick my analysis (uninterpreted - don't dispute
what you think I said). I don't post without caveats
if I think the content is dubious.

You, on the other hand are flat out stating that none
of this can be impedance matching while you've shown
(in the same posts even) that you have a very limited
view of what impedance matching may be. How do you know
it isn't impedance matching if you dont recognize
several commonn examples or if you think filters are
frequency selective for some reason other than
storing energy?

>
> MISCONCEPTIONS SPREAD BY K-6 SCIENCE TEXTS
> http://www.amasci.com/miscon/miscon.html
>

(1) You can add astitine (At) to the missing elements.
It's a halogen.

(2) The action-reaction statements are at best misleading
and more appropriate for a page having to do
with reading old works. You've taken a simple
physics concept and made it obscure with some
notion of what newton intended, not what it
really means. There are always action-reaction
pairs. In your skate board example the force
exerted on the skateboard by the user is the
same as the exerted on the user by the skateboard.
The center of mass never moves. F = 0.

(3) (why do you make something simple convoluted)
Gasses do fill their containers. You just dont
want to consider a denser gas or any other
gas as the equivalent of a container despite
the fact that the same electrical forces prevent
the expanding gas from filling the space occupied
by the container.

(4) Your "cars and planes are not slowed by air
friction" answer is no more correct than the
one you claim is wrong. The correct answer
is that the random thermal motion of the
air produces a net force if you are moving
relative to the center of mass motion of
the air around you. The probability of striking
molecules in the air in the direction of motion
is greater than from behind. Your swirling
and turbulence only removes the problem back
a step since you don't say how that can
have any effect except by the air friction
explanation you claim is wrong.

(5) Electric charges aren't visible unless you know of
some elementry particles that carry charge and
happend to be about 4000 Angstroms in size.

The effects of smaller things like electrons
may be visible under the right conditions,
like when the air subsequently recaptures electrons
that are ionized by collisions from electrons
accelerated in an electric field (you and your doornob
after shuffling across the carpet) Cant see the
charges themselves though.

2639. Re: "energy sucking" simplified

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38E1DD5D.551523C1@nospam.gecm.com>
Source record: 61935
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Science Hobbyist wrote:

> And maybe I'll try running some flashlights and electric
> shavers in my home by wrapping a big transmitter loop
> around the house, and driving it with 30KHz or so.
> I wonder how small a hi-Q antenna can be made, yet
> still light a flashlight bulb when near a large loop
> being driven with a couple of amps at 30KHz? Put it
> in a plastic flashlight, or inside a toy robot?
>

If you want to make the effort to work it out, the equations are
there to be applied. Arm-waving only takes you part of the way.
Alan

2640. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8bsssssdi1@uranium.btinternet.com>
Source record: 61936
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

In any real circuit there is resistance. When one capacitor
exponentially charges up from the other the 'lost' energy is
dissipated in the resistance.

The loss is the same regardless of the resistance value. The higher
resistance values just take longer to do the job.
--
Reg.
==========
Mike <mike@nospam.com> wrote in message
news:fzgE4.129740$bm.456676@news1.alsv1.occa.home.com...
>
> "Science Hobbyist" <bbeaty@microscan.com> wrote in message
> news:8bhkf6$k7r$1@nnrp1.deja.com...
> > In article <Kz3VOFHPDbG+apaj6vA3g+dbF0Nn@4ax.com>,
> > John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
> >
> > [...]
> >
> > > There are a
> > > number of simple 'paradoxes' (or 'miracles' if you are so
inclined)
> > > that recur in circuit theory. The persistant classic is the case
of
> > > two 1 farad capacitors, one charged to 2 volts, the other at
zero.
> >
> > I'm well aware of that one. Physics teachers commonly
> > use it as a trick question on final exams (for extra credit
> > only, if their hearts are in the right place.)
> >
> > > What happens when they are paralleled? If both wind up at 1
volt, as
> > > circuit theory predicts, then where did the energy go?
> >
> > It oscillates as a one-turn inductor with the two
> > capacitors, and either heats the wires and capacitor
> > dielectric, or if this is just a thought experiment,
> > oscillates forever or perhaps radiates its energy away.
>
> Okay, so what happens if my original capacitor was really two 1/2
farad
> capacitors in parallel, and the way I got them charged to 2V was by

> connecting them in parallel, and what if I had done that over and
over
> again...
>
> In fact, there is no oscillation, no significant radiation, and no
> significant heating. There is work done, of course, but why let this
little
> detail interfere with a brand new interpretation of physics?
>
> -- M --
>
>

2641. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <d5qCYpAfRb44EwJR@jmwa.demon.co.uk>
Source record: 61937
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<fzgE4.129740$bm.456676@news1.alsv1.occa.home.com>, Mike
<mike@nospam.com> inimitably wrote:
>"Science Hobbyist" <bbeaty@microscan.com> wrote in message
>news:8bhkf6$k7r$1@nnrp1.deja.com...
>> In article <Kz3VOFHPDbG+apaj6vA3g+dbF0Nn@4ax.com>,
>> John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
>>
>> [...]
>>
>> > There are a
>> > number of simple 'paradoxes' (or 'miracles' if you are so inclined)
>> > that recur in circuit theory. The persistant classic is the case of
>> > two 1 farad capacitors, one charged to 2 volts, the other at zero.
>>
>> I'm well aware of that one. Physics teachers commonly
>> use it as a trick question on final exams (for extra credit
>> only, if their hearts are in the right place.)
>>
>> > What happens when they are paralleled? If both wind up at 1 volt, as
>> > circuit theory predicts, then where did the energy go?
>>
>> It oscillates as a one-turn inductor with the two
>> capacitors, and either heats the wires and capacitor
>> dielectric, or if this is just a thought experiment,
>> oscillates forever or perhaps radiates its energy away.
>
>Okay, so what happens if my original capacitor was really two 1/2 farad
>capacitors in parallel, and the way I got them charged to 2V was by
>connecting them in parallel, and what if I had done that over and over
>again...
>
>In fact, there is no oscillation, no significant radiation, and no
>significant heating. There is work done, of course, but why let this little
>detail interfere with a brand new interpretation of physics?
>
In the ideal case, of lossless capacitors and zero-resistance wires (but
neither can have zero inductance, of course), there is indeed continuous
oscillation and radiation, but there is no heating, of course, because
there is no resistance. In a real experiment, there may be all three,
but up to two may be of negligible significance.

You can, after all, do the experiment, using, for example, 100 nF
polystyrene capacitors charged to 100 V, and you can verify the result,

even detect the damped oscillation and radiation.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2642. Digital and RF down same coax cable.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Tom Turnbull <Tom.Turnbull@durham.ac.uk>
Message-ID: <8bt0i3$206$1@sirius.dur.ac.uk>
Source record: 61938

Is it practical/possible to consider sending digital signals to rotate an antenna (say) up the same coax which connects the antenna to a receiver? Has this sort of thing been done?

Tom.

2643. Re: Digital and RF down same coax cable.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Mark Nelson <mnelson@pedinc.com>
Message-ID: <38E20D66.ACB66927@pedinc.com>
Source record: 61939

Tom Turnbull wrote:
>
> Is it practical/possible to consider sending digital signals to rotate an
> antenna (say) up the same coax which connects the antenna to a receiver? Has
> this sort of thing been done?
>
> Tom.

This sort of thing is done all the time. The biggest limitation is the length of the cable and its effect on the quality of the digital signals (keep data speed low). All you need is a "splitter" at each end to keep the RF out of the digital and vice-versa. Simple L-C networks work fine for most HF applications. Generally the RF can be AC-coupled and the low-frequency digital stuff isolated with an RF choke, which will preserve the DC.

Good luck!

--
Mark Nelson

A collector of TV signal boosters and UHF converters -- God help me!
http://www.geocities.com/TelevisionCity/Set/6312/

2644. Re: Source of very flexible coax cable?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Mark Nelson <mnelson@pedinc.com>
Message-ID: <38E20FDF.CC7FEA18@pedinc.com>
Source record: 61940

Butch Magee wrote:
>
> how much does the transceiver weigh? the mic? the antenna? I think your
> concerns are not real. Try Maxon or similar, everything is in the
> headphones and will work great,...unless of course you intend to work DX.
> Ahhhh.....the family radio thing with the headset and vox. Thats the
> ticket, yeah, talk to your girlfriend like I do, yeah...thats it, ya' talk
> to her naked.....!
>
> Butch
>

Actually this is a DATA radio, sending back physiological measurements.
It already weighs too much at about 8 ounces, so it's going to be in a
waist or fanny pack, whichever causes the least discomfort for the
marathoner. The antenna is likely to be just a quarter-wave piano-wire
spike at the end of the cable (maybe with a "bazooka" matching section
if we can find light enough material).

--
Mark Nelson

A collector of TV signal boosters and UHF converters -- God help me!
http://www.geocities.com/TelevisionCity/Set/6312/

2645. Re: Rocket DME/Telemetry...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8bt2ui$e94$1@ausnews.austin.ibm.com>
Source record: 61941

In <38E14F98.24ED41D9@Rasdoc.com>, Paul Breed <Paul@Rasdoc.com> writes:
>
>The group at:
> http://www.space.com/space/launches/cats_launch_000328.html
>
>Is trying to measure the altitude of a Rocket using GPS.
>Normal non aerospace GPS receivers have a hard time handeling high GPS
>doppler rates
>such as produced in the rocket.
>
>
>I have no involvement with them at all.
>I'm just a geek that was wondering if this is the best approach.
>How hard would it be to measure the rocket position with a transmitting
>beacon on the Rocket?
>
>My idea...
> Put a beacon on the Rocket that transmits a short UHF CW pulse every
>second or so.
> The duty cycle would be low enough to reduce average power.
> (It could send a morse ID every 10 min to be legal)
>
>Place 4 or more ground stations to recieve this pulse.
>
>Use GPS to syncronize the clocks at the ground stations.
>How hard would it be to measure the ariival time of the pulse with
>enough accuracy
>to measure vertical distance?
>
>Realize that the transmit time of the pulse is unknown, so we have four
>times of reception
>to solve for 4 unknowns.
>
>Rocket X,Y,Z and Time of Tx.
>We can postprocess the individual GPS Rx clock offsets to know the
>different RX clock offsets to better than 100nsec.
>
>How hard would it be to measure the arrival time of 70cm or 23cm pulse
>to better than 1 usec?
>This would give an aproximate range measurment of +/- 900 ft.
>
>
>How would you build the simplest pulse transmitter to do this?
>

>How would you build a receiver to recieve the pulses.....
>(Remember that the rocket can go Mach 3.5 so the doppler is not
>insiginificant.)
>I was thinking a DC Rx tied to a reasonable gain Yagi.
>The operational environment is out in the Black rock desert, so it
>should not be a high intermod environment on UHF.
>
>
>Paul (Kl7JG)

One of the problems of using a GPS unit on a rocket is that most commercially available GPS units will not function while moving at over a certain speed, nor will they function above a certain altitude (This was an intentional design feature since the government didn't want to allow just anyone to build a missile which used GPS for its guidance system!). I know that some of the balloon launch groups have had GPS failures when their balloon carried GPS receivers reached a certain altitude. Thus, GPS on the rocket may not be the best solution.

I think the technique you proposed will work, although calibrating the receiver clocks will be non-trivial. Plus, if you'll check the specifications on GPS, I think you'll find that the vertical resolution is rather poor in the mode it normally operates in (non-SA?). The horizontal resolution is rather good, but the vertical resolution can drift by up to 1000 feet (if I'm remembering right). You'll have to factor in such differences in the altitude of the receive stations, although you might be able to use a differential GPS approach to minimize the effect.

In any case, the trickiest part will be obtaining the timing signal from the GPS and using that to time the reception of the signal. This will involve some custom hardware (There's no way that you'll be able to get a signal out of a GPS unit and into a computer with anywhere near a 100 nanosecond accuracy.).

One idea I've toyed with in the past would be to mount a repeater on the craft (balloon, rocket, whatever). Then, using an approach like radar, only with an active reflector, you can time the propagation from each of several stations. For example, ground station one transmits a pulse. The repeater on the craft receives it and retransmits it. The ground station receives the signal, and is able to accurately measure the amount of time between its transmission of the signal and the reception of the signal. This lets the ground station determine exactly how far away the craft is. And, note that since the received signal is on a different frequency than the transmitted signal, it is not necessary to switch the transmitter on and off rapidly, nor is it necessary to switch the receiver on and off rapidly. The receiver may be left running while the transmitter is keyed. Additionally, it may be useful to use a modulated signal rather than just watching for the carrier.

By measuring the doppler shift, the gound station can measure exactly how fast the craft is moving away from (or toward) the ground station.

In operation, each ground station would repeat the process (e.g., on the 0, 3, 6, 9, etc. seconds, ground station one performs the measurement, on the 1, 4, 7, 10, etc. seconds, ground station two performs the measurement, on the 2, 5, 8, 11, etc. seconds, ground station three performs the measurement.). Or, if a linear transponder were used on the craft, slightly different frequencies could be used by each ground station, allowing measurements by all the ground stations at the same time.

The simplest measuring device might be a good two channel oscilloscope with a good timebase. One channel would monitor the transmitter output, while the other would monitor the receiver. I'm sure a more elaborate system could be devised if a little custom hardware could be built.

There may be other variations on this approach. One alternative would be to use a passive reflector on the craft and use a pure radar approach, although the power requirements might get to be a bit excessive (although the use of a corner reflector on the craft might help). A similar approach could be done using lidar (laser based radar). One of the advantages to going with a passive reflector, instead of the active repeater, is that since the craft would not be emitting any signals of its own, the identification requirements would not apply to it (e.g., Only the ground stations would have to identify, and it is presumed that there are no weight requirements there.).

If you have an extremely accurate way of measuring the elevation of the signal (and, I mean much more so than what you would have using a simple beam antenna), you might be able to determine the position/altitude using just a single ground station (e.g., You'd know the distance, elevation, and azimuth, and that uniquely identifies the position.). One idea for some thought would be to use a UHF uplink which, when received on the rocket, caused a strobe light to flash. By measuring the propagation delay, you'd know the distance exactly, and you could use optical means to measure the azimuth and elevation (assuming that there was no cloud cover, but most areonautical rules that I'm familar with restrict rocket/balloon launches when there is cloud cover). Or, you could use a radio approach to measure the distance, and use a randomly flashing strobe to optically measure the elevation/azimuth.

Of course, the very first thing you should do is to do some research to see if any other group has already solved this problem. I'm aware that there's an amateur rocket group in Denmark which is fairly active and which has published a bit of literature:

http://inet.uni-c.dk/~dark/

Additionally, there are quite a number of groups launching balloons with radio equipment on board. I don't have a good reference for these, but there are some links from the AmSat page:

http://www.amsat.org/

In any case, it sounds like a fun project. Thanks for the pointer.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2646. Re: Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Mark Nelson <mnelson@pedinc.com>
Message-ID: <38E213D8.E556EED2@pedinc.com>
Source record: 61942

Assuming the transceiver is actually supposed to respond to low input voltages that way, the lowest-tech way around this would be to add a single cell (2V) to the battery supply. Single cell lead-acid batteries may still be available in surplus (if you see some, let me know), or you could use gell-cell batteries such as those made by Gould. I've seen (and owned) 2V gelled electrolyte batteries and they're still listed in the catalogs. New large ones are in the $30 range, I think.

--
Mark Nelson

A collector of TV signal boosters and UHF converters -- God help me!
http://www.geocities.com/TelevisionCity/Set/6312/

2647. Re: WTB: HP 11730A cable

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <38E22455.8E6816A7@ix.netcom.com>
Source record: 61943

John, if you want to make one up, those DIN plugs are available from Allied, #246-7210, about $15 each I think. You can look them up online....

TRW Swap meet price for that item used to be about $85. e-bay, Heaven knows :-)

73

Dan

2648. tube 6886

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-29 00:00:00 UTC
From: "philippe.cassette" <philippe.cassette@wanadoo.fr>
Message-ID: <8btjiq$ch1$1@wanadoo.fr>
Source record: 61944

Hi,
I am looking for the characteristics of a 6886 Thomson Csf tube, probably a triode. Could somebody help ?
73

Philippe F1PPK
philippe.cassette@wanadoo.fr

2649. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000329204714.14269.00000716@nso-bd.aol.com>
Source record: 61754

In article <8bfsbrlrm1@nnrp1.deja.com>, paulygman@my-deja.com writes:

>I am building a small one tube regenerative reciever. The tuning
>circuit calls for two variable capacitors hooked up in paralel a 15 pfd
>and a 100 pfd. Which is the bandset and which is the bandspread
>variable capacitor?

The 100 pf capacitor is the bandset/main tuning. It is used to get you close to the desired frequency.

The 15 pF capacitor is the bandspread tuning. It is used to actually tune signals.

In most designs, the coil and the two capacitors are all in parallel. The stray capacitance in a circuit of this type will be on the order of 10 pF, and the minimum capacitance of the capacitors will total about another 10 pF. So the tuned circuit will have a maximum C of about 125 pF and a minimum C of about 20 pF. That's a 6 to 1 ratio of capacitance, which means about a 2.5:1 tuning range per coil. For example, a typical tuning range might be 2 to 5 MHz.

You can see that the tuning rate of the bandset capacitor will be about six or seven times that of the bandspread capacitor.

> I have a 5 to 1 reduction drive dial, which
>capacitor do I put it on?

The bandspread (15 pF) capacitor. Here's why:

The reason for using two capacitors in parallel in this design is to allow you to cover a wide range of frequencies with relatively few coils, yet also have a reasonably slow rate of tuning. In the above example, the main (bandset) tuning capacitor will have a tuning rate of 6 MHz/turn (because it covers 3 MHz in a half-turn). The bandspread tuning capacitor will have a tuning rate of about 1 MHz per turn.

If you put the reduction drive on the main tuning, you will reduce its tuning rate by a factor of 5 - to 1.2 MHz per turn. That's about the same as the bandspread rate, which defeats the purpose of using two capacitors! And that tuning rate is way too fast for easy tuning.

But if you put the reduction drive on the bandspread tuning, its tuning rate is reduced to 200 khZ/turn, which is not too bad.

The whole point of the design is to reduce the tuning rate. Putting the reduction drive on the bandset cap defeats the purpose of having two capacitors.

Of course, if you can get two reduction drives, put one on each cap.

In all of the two-dial designs I've seen, the best reduction dial is on the bandspread cap. The first regen I ever built had the reduction drive on the bandset capacitor - it got rebuilt after a short time because it was all but useless because of the high tuning rate.

Building regens is easy. Building good regens is not so easy.

What design is this receiver? What tube is used, and where did you get the circuit?

73 de Jim, N2EY

2650. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <vtyE4.382$TM.31319@bgtnsc06-news.ops.worldnet.att.net>
Source record: 61755

N2EY wrote in message <20000329204714.14269.00000716@nso-bd.aol.com>...
>In article <8bfsbrlrm1@nnrp1.deja.com>, paulygman@my-deja.com writes:
>
>>I am building a small one tube regenerative reciever. The tuning
>>circuit calls for two variable capacitors hooked up in paralel a 15 pfd
>>and a 100 pfd. Which is the bandset and which is the bandspread
>>variable capacitor?
>
>The 100 pf capacitor is the bandset/main tuning. It is used to get you close to
>the desired frequency.
>
>The 15 pF capacitor is the bandspread tuning. It is used to actually tune
>signals.
>
>In most designs, the coil and the two capacitors are all in parallel. The stray
>capacitance in a circuit of this type will be on the order of 10 pF, and the
>minimum capacitance of the capacitors will total about another 10 pF. So the
>tuned circuit will have a maximum C of about 125 pF and a minimum C of about 20
>pF. That's a 6 to 1 ratio of capacitance, which means about a 2.5:1 tuning
>range per coil. For example, a typical tuning range might be 2 to 5 MHz.
>
>You can see that the tuning rate of the bandset capacitor will be about six or
>seven times that of the bandspread capacitor.
>
>> I have a 5 to 1 reduction drive dial, which
>>capacitor do I put it on?
>
>The bandspread (15 pF) capacitor. Here's why:
>
>The reason for using two capacitors in parallel in this design is to allow you
>to cover a wide range of frequencies with relatively few coils, yet also have a
>reasonably slow rate of tuning. In the above example, the main (bandset) tuning
>capacitor will have a tuning rate of 6 MHz/turn (because it covers 3 MHz in a
>half-turn). The bandspread tuning capacitor will have a tuning rate of about 1
>MHz per turn.
>
>If you put the reduction drive on the main tuning, you will reduce its tuning
>rate by a factor of 5 - to 1.2 MHz per turn. That's about the same as the
>bandspread rate, which defeats the purpose of using two capacitors! And that
>tuning rate is way too fast for easy tuning.
>
>But if you put the reduction drive on the bandspread tuning, its tuning rate is
>reduced to 200 khZ/turn, which is not too bad.
>

>The whole point of the design is to reduce the tuning rate. Putting the
>reduction drive on the bandset cap defeats the purpose of having two
>capacitors.
>
>Of course, if you can get two reduction drives, put one on each cap.
>
>In all of the two-dial designs I've seen, the best reduction dial is on the
>bandspread cap. The first regen I ever built had the reduction drive on the
>bandset capacitor - it got rebuilt after a short time because it was all but
>useless because of the high tuning rate.
>
>Building regens is easy. Building good regens is not so easy.
>
>What design is this receiver? What tube is used, and where did you get the
>circuit?
>
>73 de Jim, N2EY
>
Great common sense, Jim.
Al

2651. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bueshfke1@nnrp1.deja.com>
Source record: 61756
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <38DFCA2D.121DFE9D@mmm.com>,
rbmccammon@mmm.com (Roy McCammon) wrote:

> And do you also agree that there is an upper
> limit as to how much energy a small resonant
> antenna with lossless components can pull
> out of a given incident em field from a
> far away transmitter.

Of course!

I keep saying that there is nothing magic about
this concept. In response, people angrily tell
me that there is nothing magic about this concept!

A really weird controversy.

All I can do is assume that they've come into
the middle of the thread, and didn't notice all the
earlier messages which angrily attack the stuff on
that website, or which angrily state that small
antennas CAN'T interact strongly with longwave
radiation, resonator or no. (It's supposedly a
violation of physical laws because the bandwidth
would be too narrow, or because such antennas must
emit all of their stored energy within a single cycle,
or because antennas REALLY absorb photons, not
waves.)

Sheesh!

((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2652. FS: Phillips Audio Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <6_yE4.33909$n03.853948@news20.bellglobal.com>
Source record: 61757

Works, nice condition. $ 40.00 plus shipping. John

2653. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8bukhelnf1@nnrp1.deja.com>
Source record: 61758
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <slrn8e0c7h.76q.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> > be fun toys, but you can't run the country using
> > this energy source.
> >
> Then why the hoopla? You just claimed earlier that
> it was a great energy source to tap. If it's less
> efficient than a coal plant, why did you spend
> the entire post, except for this paragrapgh
> disputing me.

Huh? In my previous message I said this:

The total energy in the earth/ionosphere
system is not that huge, its something like
tens of megawatts.

Yet in your message you (again) start talking about
perpetual motion machines. I'm not discussing
"PM." I've never made claims about perpetual motion
machines in ANY of this "energy sucking" business, or
in regards to electrostatic motors powered by tall
vertical antennas, yet you and others keep bringing
up the topic, and so I keep responding with objections.

This stuff about electrostatic motors has little to do
with any previous thread, except that it's again equating
the things I mention with "perpetual motion."

ANYWAY, what I was disputing was this:

bilge wrote:
> you can't extract the energy stored between the
> plates of a capacitor without placing something inside
> that can change the electric field at no energy cost.
> The only way to "tap into it" implies perpetual motion.

This is wrong. It is perfectly possible to "tap into"
the energy stored in the earth's capacitor, so
my reply was to explain why these "sky powered"
electrostatic motors really work. To tap into it
just requires taking advantage of the electrical
resistance of the atmosphere (and throwing away
significant energy in the process.) Such motors are
impractical for most any use. They are laboratory

curiousities only, and science projects for children.
But they have no relation to perpetual motion machines
or "maxwell's demon" phenomenon as you stated:

> The only way to "tap into it" implies perpetual motion.

> I dont believe I've ever encountered someone that deliberately
> misunderstaands at every opportunity just to insure no information
> ever flows in. Is there some advantage to mis-stating what
> someone tells you just so you aren't stuck arguing with yourself?

I responded because of your above statement about PM,
and these statements below :

bilge wrote:
> The most you could do is to try and take
> advantage of the fluctuations about the stored
> energy, not the absolute value of the total. If you
> want a better way to become frustrated, try maxwell's
> demon or szilard engines as an example of just
> how non-obvious the gotchas can be.

bilge wrote:
> But, you forgot that you have to supply the lift to
> place the wire there. This isn't an insignifcant point
> because the same energy that separates the charges
> that give rise to a potential difference, must be
> overcome to keep the wire there.

Why is the lifting of the antenna important? **IF** the
atmosphere was a perfect insulator, your arguement
would be valid, because the motor would only run while
the antenna was being raised or lowered, and the energy
which spins the motor would come entirely from the work
done in moving the antenna. Hence there would be no
tapping of the stored energy in the earth/ionosphere
capacitor, and if I claimed differently, then I would
obviously be a perpetual-motionist crackpot. Looks like
a pretty clear argument to me, and so I responded
by arguing that is real physics, not perpetual motion.

PS, I **AM** a perpetual-motionist crackpot, so if
you want to point this out, it's easy enough to do.
Just take a look at my website.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

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2654. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8busvm$uo9$1@nnrp1.deja.com>
Source record: 61759
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <slrn8e0a20.76q.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:
> A distraacted Science Hobbyist made these comments concerning
> >Re: DOH! My big "energy sucking" error!:
> >
> > The cure is to READ messages, and not to assume
> > that they mean anything else than they state.
>
> Yes, it is. I've addressed every facet of your antenna with
> halliday & resnick level physics,

Either I see holes so obvious that I ignore the arguments,
or your arguments are accompanied by extreme hostility
and not a little sneering, and discussion (for some
mysterious reason) is diverted again and again into
trivia and sudden changes of subject.

I've encountered such behavior before. It indicates a
person whose great fear is to lose an argument to an
"inferior mind" in a public forum, or to have to admit
to the smallest error publicly. These encounters are
very common on newsgroups, and are always a no-win
situation.

If my estimation of your character is way off base, then
show me that I'm wrong: ditch the immature flamer crap.
Demonstrate the extreme self-honesty that's part of
"Scientific Integrity" as Feynman outlines very well
in his CARGO CULT SCIENCE article. Drop all the
defensiveness, be prepared to confront the errors in
your own arguments as well as mine, and to publicly say
the words "I'm wrong" when the situation calls for
it. And I will do the same.

> and so far, no one, yourself
> included, has pointed out an error or inconsistency in what
> I've posted.

True. Whenever you become angry and deliver insults, I
refuse to respond, and you "win" the fight.

If you can participate in a rational discussion without
using ridicule as a debating tactic, or bursting into anger,
then I will address your objections. If not, then emotion
defeats reason, all communication is pointless, and again

you "win" the fight.

Also, your messages lack a .sig or even a name, which is one more reason for me to not take you very seriously. Are you associated with an academic institution? Working in a particular department? Why hide it? You come across as a fairly young physics grad student with plenty of theoretical training but not many years of real-world science yet under your belt. If this is not true, I'd like to know what the true situation might be. I might respond to you very differently if you acted somewhat professionally, rather than remaining concealed behind newsgroup-anonymity.

As for me, I'm a forty year old electrical engineer (see resume on my website) with a passion for explaining science, (especially physics, especially EM) to the public. "The public" means grade-6 level, the same level of understanding at which the New York Times is aimed. That means VISUAL/INTUITIVE explanations wherever possible. That means I must constantly strive to think like a 6th-grader, yet understand the subject above the undergrad level.

This "energy-sucking" subject is of particular interest to me because it contains a visual/intuitive explanation for both AM portable radio antennas and simple crystal radio operation. Are such things disgustingly primitive, and beneath the consideration of "real" physicists? Not if those physicists are educators, and not if they take seriously the Einstein quote "You really don't understand something unless you can explain it to your grandmother." What is "energy sucking" good for? It is something visual that the public can understand, and probably will find intriguing.

A sample of my "science Q&A" at the MAD SCIENCE project: http://www.amasci.com/amateur/answers1.html

Using math to explain physics to the public is like the physicians of past centuries using latin. Obviously it's a total necessity for communication and understanding within the profession, but when communicating with the public, it easily becomes a route to superior posturing and ego-gratification. Feel free to see me as a lowly 6-th grader. However, if this gives you feelings of disgust or haughty superiority, the problem is not with me.

> No one claims a resonant antenna violates any known
> physical law.

Let's see. I recall pointing out that a small resonant
dipole develops a very strong local e-field because
the antenna intercepts incoming EM waves, then it
stores this energy in its LC circuit, and the stored
energy builds up over many cycles, resulting in a
high voltage across the LC circuit and an intense
e-field close to the antenna.

You said no, this is wrong because any energy received
during one half-cycle is entirely radiated away during
the next half-cycle.

I don't know what to make of this. What is your
intention? Look at the implications of your argument.
You are arguing that a small resonant antenna
is a scatterer only and no energy is absorbed (i.e.
it does not act as a radio antenna at all.) If you argue
that small resonant antennas simply don't work, yet others
send me quotes from antenna-design texts describing their
common applications, then I ignore your arguments as
hopelessly flawed and am led to wonder what your
intention was.

You earlier used a similar argument regarding atoms:
that an atom must emit its EM energy within the time of
a single cycle. But look at the implications of your
assertion: the duration of the emitted EM wave would be
so short that its spectral line width would be enormous.
The narrow line widths of atomic emissions lead to the
conclusion that when atoms emit EM waves, the number of
cycles in such a wave is large, not n=1 or n=0.5. How
narrow are spectral line widths in practice? How many
cycles of an EM wave are associated with typical
optical linewidths in, for example, low pressure gas
discharge lamps?

Just look at a mercury vapor arc lamp, with it's very
UN-cooled atoms and their short times between
collisions. Gabor was doing holography using such a
light source, and the temporal coherence is somewhere
around 1mm more or less. Those excited mercury atoms
each emit coherent wavetrains with lengths of at least
a few thousand cycles. Your viewpoint on how atoms emit
photons might be correct, but your descriptions of their
EM waves is significantly different than the stuff
in physics textbooks. Again I must ignore your
arguments, and wonder what the heck is going on in your
head, and what your goal might be in presenting
such arguments.

> I can
> safely say an antenna that works, doesn't violate physical law.
> The same cannot be said for your explanation of how it works.

Then we can agree on SOMETHING.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

2655. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Mike <mike@nospam.com>
Message-ID: <aOCE4.131056$bm.467685@news1.alsv1.occa.home.com>
Source record: 61760
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
news:d5qCYpAfRb44EwJR@jmwa.demon.co.uk...
> <fzgE4.129740$bm.456676@news1.alsv1.occa.home.com>, Mike
> <mike@nospam.com> inimitably wrote:
> >"Science Hobbyist" <bbeaty@microscan.com> wrote in message
> >news:8bhkf6$k7r$1@nnrp1.deja.com...
> >> In article <Kz3VOFHPDbG+apaj6vA3g+dbF0Nn@4ax.com>,
> >> John Larkin <jjlarkin@highlandSnipSniptechnology.com> wrote:
> >>
> >> [...]
> >>
> >> > There are a
> >> > number of simple 'paradoxes' (or 'miracles' if you are so inclined)
> >> > that recur in circuit theory. The persistant classic is the case of
> >> > two 1 farad capacitors, one charged to 2 volts, the other at zero.
> >>
> >> I'm well aware of that one. Physics teachers commonly
> >> use it as a trick question on final exams (for extra credit
> >> only, if their hearts are in the right place.)
> >>
> >> > What happens when they are paralleled? If both wind up at 1 volt, as
> >> > circuit theory predicts, then where did the energy go?
> >>
> >> It oscillates as a one-turn inductor with the two
> >> capacitors, and either heats the wires and capacitor
> >> dielectric, or if this is just a thought experiment,
> >> oscillates forever or perhaps radiates its energy away.
> >
> >Okay, so what happens if my original capacitor was really two 1/2 farad
> >capacitors in parallel, and the way I got them charged to 2V was by
> >connecting them in parallel, and what if I had done that over and over
> >again...
> >
> >In fact, there is no oscillation, no significant radiation, and no
> >significant heating. There is work done, of course, but why let this
little
> >detail interfere with a brand new interpretation of physics?
> >
> In the ideal case, of lossless capacitors and zero-resistance wires (but
> neither can have zero inductance, of course), there is indeed continuous
> oscillation and radiation, but there is no heating, of course, because
> there is no resistance. In a real experiment, there may be all three,
> but up to two may be of negligible significance.

>
> You can, after all, do the experiment, using, for example, 100 nF
> polystyrene capacitors charged to 100 V, and you can verify the result,
> even detect the damped oscillation and radiation.

I've never done this experiment at 100V, but I've done it at 1V and under, and this kind of charge transfer forms the basis of switched capacitor filters. The inductance in this case is negligible compared to the resistance, but that would be true even if the resistance were near zero. The wires are a few microns long, and the inductance is most likely in the pH range. Given that there's some finite resistance, the oscillation due to wire inductance is negligible.

What I was really objecting to was the contention that the energy difference must have been radiated into space or dissipated in resistance. It takes work to increase the voltage on the new capacitor from 0 to 1V, and in an ideal sense, this work is equal to the change in energy of the systm.
-- Mike --

2656. Re: LM3900 - Obsolete

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38e27c3a.87747218@news.online.no>
Source record: 61761

On Wed, 29 Mar 2000 01:35:36 -0500, "bertram" <bcholden@bellsouth.net>
wrote:

>CA3401, CA3401, CA3401
> Dyslexia had struck the author of the previous entry in this string when he
>mistakingly blurted out that the CA3140 was is a substitute for the noble
>Norton amplifier, LM3900. Don't believe what that guy writes! Ever!
>and besides, I don't know where to get any of these, either.
>
>
suppose you mean diarrhoea... a habit many suffers from, posting
rubbish which makes no sense, whether it is CA3401 or CA1340 isn't
important if you never have studied an op-amp (or used it)

2657. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <HSCE4.12106$3g5.852754@tw11.nn.bcandid.com>
Source record: 61762

"Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
news:8br0s2$8fp$1@plutonium.btinternet.com...
> Hi Carl,
> ...
> Have you noticed not a single manufacturer specifies the measuring
> accuracy of his ordinary SWR meters. They don't even bother to state
> the reference impedance. Why don't they ? Simple, they don't have
> even the foggiest idea !

Thanks for the additional info, Reg. It is important to be clear about the type of device we're discussing. I hadn't ever bumped into the question before of how accurate the "through-line" type meters are.

You can find specs on things like the Bird 43 meter, but it doesn't attempt to measure forward & reverse simultaneously, nor does it have a scale calibrated for SWR. I've seen people use back-to-back Bird line sections to do the job, and a quick scribble tells me that +/- 10% accuracy may be obtained if the SWR
isn't too high, and if you're near full-scale. If, if, if... so 20% is probably
more typical, and I can see it getting even worse than that.

It's good to note, though, that SWR meters, if they're well built and adjusted, do a
reasonable job of indicating the SWR minimum and whether you're at least in the ballpark of 1:1. The accuracy suffers most at higher SWR.

>
> But most amateurs take SWR meters as telling the Gospel truth. Not
> that it matters very much anyway.
> --
> Regards, Reg.
>

People in general tend to believe measurement instruments more than they ought. (And I speak as a person who earns a living designing measurement instruments.)

73 -- Carl WS7L

2658. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e64dt.93j.root@radioactivex.lebesque-al.net>
Source record: 61763
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist said some stuff about
>
> Why is the lifting of the antenna important? **IF** the
> atmosphere was a perfect insulator, your arguement
> would be valid, because the motor would only run while
> the antenna was being raised or lowered, and the energy

Because it's the same forces that require you lift the
antenna created the capacitor in the first place
by establishing the hegiht h that the atmosphere
maintains the the charge that produces the potential.
That means the equilibrium position determined by
gravity, temperature, and so on. I maintain that no
scheme is possible that would bleed off enough charge
to change that equilibrium position with out expending
the energy than one gains.

> which spins the motor would come entirely from the work
> done in moving the antenna. Hence there would be no

It doesn't float for free. Ask the people that have tried
circumnavigating the globe in a balloon how har it is
to stay in the air.

2659. A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: guest@host.com
Message-ID: <38e31000.3553209@news.direct.ca>
Source record: 61764

I'm going to need about a 48v dc supply to power some relays for
antenna switching. I do not want to use a transformer. Can I use a
combination of resistors and some diodes to get some crude dc from the
110v ac enought to power 1 relay at a time.

email jprocyk@direct.ca

2660. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38E30E21.1B5EB277@nospam.gecm.com>
Source record: 61765
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist wrote:

> Is there something weird about sci.physics.electromag,
> where whenever someone starts explaining antennas in an
> odd way, everyone suddenly assumes that perpetual motion
> machines are being discussed?
>
> If an antenna absorbs energy from a wave, it's not
> perpetual motion. If an extremely small antenna absorbs
> EM energy as if that antenna was electrically much larger
> than its physical size, in what way is this a claim
> that a perpetual motion machine is possible?

SH - where you are going wrong (in my opinion) is that you have selected a very simple antenna system which is perfectly calculable with well known formulas that anyone can get out of a textbook. You are then choosing to ignore that and invent a whole edifice of "look at this amazing effect" with a lot of arm-waving and ineffectual arguments. Ineffectual because they fail to quantify what is happening, whereas the old-fashioned explanantion quantifies it perfectly. Small antennas can have large capture areas. They might also have very high Q and small bandwidth. Nothing new here. What's your problem? Is this going to lead us anywhere?
Alan

2661. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Mark Mallory <mark560@earthlink.net>
Message-ID: <38E31187.1CF0E27E@earthlink.net>
Source record: 61766
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Alan Boswell wrote:
>
> Science Hobbyist wrote:
>
> > Is there something weird about sci.physics.electromag,
> > where whenever someone starts explaining antennas in an
> > odd way, everyone suddenly assumes that perpetual motion
> > machines are being discussed?
> >
> > If an antenna absorbs energy from a wave, it's not
> > perpetual motion. If an extremely small antenna absorbs
> > EM energy as if that antenna was electrically much larger
> > than its physical size, in what way is this a claim
> > that a perpetual motion machine is possible?
>
> SH - where you are going wrong (in my opinion) is that you
> have selected a very simple antenna system which is perfectly
> calculable with well known formulas that anyone can get out
> of a textbook. You are then choosing to ignore that and invent
> a whole edifice of "look at this amazing effect" with a lot of
> arm-waving and ineffectual arguments. Ineffectual because
> they fail to quantify what is happening, whereas the old-
> fashioned explanantion quantifies it perfectly. Small antennas
> can have large capture areas. They might also have very high
> Q and small bandwidth. Nothing new here. What's your problem?
> Is this going to lead us anywhere?
> Alan

2662. Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: W2EB <n2tpaNOn2SPAM@juno.com.invalid>
Message-ID: <30264000.de869f54@usw-ex0102-013.remarq.com>
Source record: 61767

I know the three main purposes of grounding: Lightning
protection, safety from "hot chassis", and RF reduction. How do
these grounds interconnect? Do these grounds interconnect?
My shack is a separate building about 100 ft. from the
house fed by 120V three wire (hot, neut, and ground). I have a
ground rod driven at the shack. Do I want to tie that ground to
the house ground that enters my shack? I fear that a lightning
strike at the shack will be more likely to do damage in the house
if I tie them together. Leaving them separate will still leave
the Power supply tied to house ground for safety, and leave the
P.S. minus line (and all equipment chassis other than the P.S.)
tied to shack ground to divert lightning energy. The NEC isn't
clear on this, as it can either treat my shack as just another
room of my house, or a separate building that needs it's own
grounding system.
Otherwise, I assume that lightning and RF grounds are very
similar in construction and must be bonded at the ground rod.
Anyone have any thoughts? Any electricians out there?

73,

Bill
W2EB

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2663. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e6eih.93j.root@radioactivex.lebesque-al.net>
Source record: 61768
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist said some stuff about

> I've encountered such behavior before. It indicates a
> person whose great fear is to lose an argument to an
> "inferior mind" in a public forum, or to have to admit

So far, I haven't been given one to lose. I don't recall
ever making statements that I have any special insight
no one else has, I dont promote any opinions in the
traditional keelynet "einstein was wrong" fashion. In
short, you've had every opportunity to address the
problems with your antenna without any of "The
Great Mistakes of Physics" self-aggrandizement. So far,
all you've done is avoid dealling with the considerable
objections to your model of hpw you think your antenna
works.

> Also, your messages lack a .sig or even a name, which is
> one more reason for me to not take you very seriously.

And it can't be important to anyone without a reason. I don't
really need you to take me seriously. What I post is either
valid or it isn't. I don't limit potential corrections
by comparing sig blocks or checking qualifications.
I also don't feel obligated to just take someone's word
that I've made an error. If you think something is incorrect,
then you should at least be able to say why.

> Are you associated with an academic institution? Working
> in a particular department? Why hide it? You come across

Because it is irrelavent. Usenet it usenet. Who I am
changes nothing about the value of anyting I post.
Loudly proclaiming credentials usually is inversely
proportional to the knowledge of the person that
is proclaiming them. There's nothing more useless than
the post from a person with a sig block full of
credentials , longer than the answer copied from the
pages of a book.

> as a fairly young physics grad student with plenty of
> theoretical training but not many years of real-world

Suit yourself. Theoretical knowledge doesnt evaporate with
age. Only the desire to retain and expand upon it does.

> professionally, rather than remaining concealed behind
> newsgroup-anonymity.
>
> As for me, I'm a forty year old electrical engineer
> (see resume on my website) with a passion for explaining

The best way to not be labled is to not provide the label.

> seriously the Einstein quote "You really don't understand
> something unless you can explain it to your grandmother."
> What is "energy sucking" good for? It is something
> visual that the public can understand, and probably will
> find intriguing.
>

Grandma probably didn't try to turn the explanation
into an APS talk.

> route to superior posturing and ego-gratification.
> Feel free to see me as a lowly 6-th grader. However,

My mistake. If that's what you wish. Ask again about
the antenna around 2006.

> if this gives you feelings of disgust or haughty
> superiority, the problem is not with me.
>
You are the person with the site exclaiming the multitude
of "incorrect" explanations that you have "rectified"
with "better" ones, not I. The fact that you trash perfectly
reasonable and picturesque descriptins of physical
processes as a means of self-promotion speaks to that
issue.
>
> Let's see. I recall pointing out that a small resonant
> dipole develops a very strong local e-field because
> the antenna intercepts incoming EM waves, then it
> stores this energy in its LC circuit, and the stored
> energy builds up over many cycles, resulting in a
> high voltage across the LC circuit and an intense
> e-field close to the antenna.

What does "strong" mean? Your definition of intercept is
somewhat "non-traditional", since it involves intercepting
more radiation than there is in the solid angle it's area
subtends. The energy isn't stored over many cycles and
a high voltage does not require that it be nor is a potential
difference stated as a "high voltage" in any way sufficient
to say anything about an electric field. That description
might as well be about a cuisinart. You've resisted all
efforts to pin those things down unless everyone first
agrees that you are correct. Since you cant make such claims
based upon what you have provided, it's incorrect. It

has nothing to do with resonant antennas until
you provide enough detail to turn it into one.

> You said no, this is wrong because any energy received
> during one half-cycle is entirely radiated away during
> the next half-cycle.
>
and...

> is a scatterer only and no energy is absorbed (i.e.
> it does not act as a radio antenna at all.) If you argue

No, I'm not. I'm arguing that if X strikes the antenna and
Y is able to be removed for use, apart from joule heating,
the remainder, X-Y gets reradiated. That's considerably
different than stating you want Y power and resonance will
help your antenna reach out and get more or that any energy
you can possibly store over longer than 1 cycle is of
any value (after a cycle, it's called equilibrium).

> that small resonant antennas simply don't work, yet others

I made no such comment. I said "energy sucking" as a
conceptual basis for one is misguided.

> send me quotes from antenna-design texts describing their
> common applications, then I ignore your arguments as

At this point, I'm beginning to doubt you understand
enough to comment. Or at least comment on something
relevant.

> hopelessly flawed and am led to wonder what your
> intention was.
>
So flawed in fact, you cant point to more than zero
of them. Apparently the cfa is nominally functional,
too. That doesn't make the explanation of how it works
any less wrong.

> cycles in such a wave is large, not n=1 or n=0.5. How
> narrow are spectral line widths in practice? How many
> cycles of an EM wave are associated with typical
> optical linewidths in, for example, low pressure gas
> discharge lamps?
>
Can you say detour? Is this 20 ways to avoid your antenna?
Come back to this when finish the first topic.

> photons might be correct, but your descriptions of their
> EM waves is significantly different than the stuff
> in physics textbooks. Again I must ignore your

Of course it's different. What point is there in simply
repeating the un-illuminating explanation that prompted
the question? Any idiot can tranfer a few lines from
a book. Providing additional information in the context
of the question that is also correct is more effort, less
likely to be found in the particular context in which
the question was posed, but more likely to be useful.
It's pretty useless to learn something without being able
to apply it in any context that it's useful.

> arguments, and wonder what the heck is going on in your
> head, and what your goal might be in presenting
> such arguments.
>
Obviously, not a goal that met with any success.

>
>> I can
>> safely say an antenna that works, doesn't violate physical law.
>> The same cannot be said for your explanation of how it works.
>
> Then we can agree on SOMETHING.
>

Then what's your problem? Everyone else already agrees that
your explanation is wrong. If you agree it's wrong, why
are you arguing that it isn't?

2664. Re: One tube regen tuning circuit question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: wa4uso@aol.com
Message-ID: <20000330081032.01061.00000010@ng-ci1.aol.com>
Source record: 61769

use the 100 pf for band set and the 15 for band spread. use the turns reduction control for the band spread.

Darrell, Regens R US

2665. Re: Help: with QRP mobile 20M or 40M?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8bvhb10cf8@news1.newsguy.com>
Source record: 61770

E. Skelton wrote in message <954364385.11514499@news.indigo.ie>...

> I Just worked W3ORU with 2.5mW. That breaks the million miles per watt
barrier!

Hey congrats ... you said below you hang on .435 - you didn't do that QSO
on phone, did you? That would be really amazing!

> I think that will be in Dublin. I probably won't be there. Enjoy
> your trip to EI. If you want to try some very low power QRP,

Yes, it will be in Dublin in the fall. I don't expect I'll get down to Cork.
Although my plans aren't firmed up yet, I've been thinking of going to the
conference then going over to Galway to just kick back for a few days. And
I *always* enjoy a trip to EI!

> give me a call on 28.435 MHz at about 18:30Z, most days.

I'll keep an eye out for you. That's the middle of the day here, but I'm
off every other Friday and today I'm taking some vacation. Sounds like the
band is pretty good already today. I dunno if I can remember how to work
that mic thingie tho.

72/73 de WB8RCR http://members.home.com/wb8rcr/index.htm
didileydadidah QRP-L #1446 Code Warriors #35

2666. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <US8wycAHVw44Ew6l@jmwa.demon.co.uk>
Source record: 61771
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<aOCE4.131056$bm.467685@news1.alsv1.occa.home.com>, Mike
<mike@nospam.com> inimitably wrote:
>It takes
>work to increase the voltage on the new capacitor from 0 to 1V, and in an
>ideal sense, this work is equal to the change in energy of the systm.

No, it isn't. That's the point. If you assume zero resistance and
inductance, the conservation equations E = CV^2/2 and Q = CV lead to
different answers for the final voltage. That is the apparent paradox
that needs explaining, and the explanation is that, even with
superconducting components and lossless dielectrics there is always
inductance.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2667. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: "Bill Turner, W7TI" <w7ti@jps.net>
Message-ID: <sso6es0iki9j8it335j9iv0r55dacqe6sj@4ax.com>
Source record: 61772

guest@host.com wrote:

>I'm going to need about a 48v dc supply to power some relays for
>antenna switching. I do not want to use a transformer. Can I use a
>combination of resistors and some diodes to get some crude dc from the
>110v ac enought to power 1 relay at a time.
>
>email jprocyk@direct.ca

Yes, but your local building inspector would have a heart attack if he
ever saw it. I strongly recommend using a transformer.

Bill, W7TI

2668. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Laura Halliday <va3ldh@sympatico.ca>
Message-ID: <38E37347.7B1E2FFE@sympatico.ca>
Source record: 61773

guest@host.com wrote:

> I'm going to need about a 48v dc supply to power some relays for
> antenna switching. I do not want to use a transformer. Can I use a
> combination of resistors and some diodes to get some crude dc from the
> 110v ac enought to power 1 relay at a time.

Why not? A power supply without a transformer is an accident waiting
to happen.
--
Laura Halliday VA3LDH "Laisse le vent tout emporter..."
Grid: FN03gs - Foly/Viennet

2669. No-code techies on 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Sid Washer <sw10@is4.nyu.edu>
Message-ID: <38E374E0.E002A710@is4.nyu.edu>
Source record: 61774

Hi; I know that the rules are changing constantly and that some license classes are bering merged. I don't pay attention to HF, working 2 meter exlusively (no repeaters!). A friend told me that 10 meter will be opened to no-code techies like us and I assured him that he was mistaken. Am I correct in my belief that it still requires at least a 5 wpm test?
TIA, sid KC2COO

2670. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <GQKE4.43683$17.986436@news4.giganews.com>
Source record: 61775

Don't sweat the grounds that much. Sink a ground rod and it will do the job for lightning and rf. It's not your responsibility to ground the power line but if that line is connected to the chassis of your transceiver it's okay.

If you have a good ground for rf it will work for lightning too. However, if a storm brews, it's wise to unplug everything, antennas and power cords, until it passes. Ground any unplugged antennas; a strike on your antenna must find a path to ground or it will arc all over the place. You may fry your coax but that's a small price to pay to save other stuff.

73, Bob K6DDX

2671. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <IQKE4.43684$17.986436@news4.giganews.com>
Source record: 61776

Oh you can do it without a mains transformer but you will need isolation somewhere for safety. You could use a switcher but it will have a high frequency transformer.

73, Bob K6DDX

2672. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: qroking@aol.com
Message-ID: <20000330110007.07272.00000020@ng-cd1.aol.com>
Source record: 61777

National electrical code requires all ground rods to be connected. if you sink a shack ground rod and you dont connect it to the main house ground rod, that is a NEC violation!! 73 all Lou

2673. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: qroking@aol.com
Message-ID: <20000330110254.07272.00000021@ng-cd1.aol.com>
Source record: 61778

Sorry, I re-read your question again, If your shack is a separate building from the main building, then it should have its own ground rod, it does NOT have to be connected to the main house ground rod. This is only the case in a separate building. My other post applies to same building.......73 Lou

2674. MIT flea, when? used to be Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: cmcnally@my-deja.com
Message-ID: <8bvv4c$45s$1@nnrp1.deja.com>
Source record: 61779

Can anyone tell me when this MIT flea is going on? I live near
cambridge and would like pick up some stuff.

thanks a lot

chris

In article <8be2jf$1gee$1@ausnews.austin.ibm.com>,

wa4qal@vnet.ibm.com wrote:
> In <38DA6EA5.A2EAB57@software.com>, Nick Caruso
<nick.caruso@software.com> writes:
> >"Thomas C. Sefranek" wrote:
> >
> >> Nick Caruso wrote:
> >>
> >> > I've got a couple of 100 ohm 1% noninductive resistors which
claim to be rated
> >> > at 20 W each. I was thinking of paralleling them and building a
dummy load.
> >>
> >> I'll bet they are not non-inductive at RF!
> >
> >Well, a guy was selling them at the MIT Flea as "non-inductive --
suitable for making
> >dummy loads". I dunno what's inside, but they're encased in heavy
metal bodies with
> >heat sinks on them.
> >
> >Now, I'm a trusting person, but I *was* planning on sweeping the load
with an MFJ-249
> >antenna analyzer to see what the SWR looked like before I actually
transmit into the
> >thing... Maybe I'll do a quick and dirty test by soldering one of
them to an SO-239
> >and sweeping that.
> >
> >Would this be a sufficient check?
> >
> >
> > thanks and best regards,
> > ncc
> > kb1dej
> >
> >

>
> That should be sufficient for HF. I wouldn't trust it for VHF or
> above since the lead inductance could become a factor.
>
> What brand are the resistors? Are they sort of a golden brown
> anodized aluminum case with leads with eye-holes on each end? Do
> they have mounting brackets, one on each opposing end to screw them
> down? (I'm trying to describe these as best as I can.)
>
> I tried making a dummy load from these once before, and it worked
> fairly well (but not perfectly) on the bottom end of the HF
> spectrum, but it was pretty awful on the upper end, and was just
> plain useless on VHF. I'm not sure if it was because they were
> (non-inductively) wire wound, or if it was the metal case that was
> causing excessive capacity.
>
> But, give it a try and see what happens. If it doesn't work, well,
> you can always make a foot warmer out of them for winter. :-)
>
> As for construction techniques that you'd asked about earlier,
> remember that oil is messy. I'd recommend not drilling a hole in
> the side of the can due to concerns about leakage. One construction
> technique I've seen is to use a paint can, and attach the connector
> on the top, and suspend the resistors about half way down in the
> can. Of course, the tricky part is making sure that the leads
> leading from the connector to the resistors act as a proper
> transmission line. You can obtain formulas to determine conductor
> spacing and size to treat them as a parallel conductor transmission
> line (Don't forget to include the permittivity of the oil in the
> capacitance calculations.).
>
> Of course, as long as the leads are less than about a tenth of a
> wavelength, you probably don't need to worry too much (e.g., the
> leads probably won't be a problem for HF, but they would be a
> concern for UHF).
>
> I've seen some designs that have incorporated a sleeve around the
> resistors to improve the thermal siphoning and circulation of the
> oil. An added advantage might be that the sleeve would act as an RF
> shield to limit the RF field (and it might make the transmission
> line analysis of the wires to the resistor easier to calculate,
> especially if the sleeve was used as the outer conductor of a
> coaxial style transmission line).
>
> As a previous poster has mentioned, be sure to think about a vent
> hole (It's no fun to have the can build up pressure and relieve it
> by splitting a seam.). You probably also want to leave a slight air
> gap between the top of the oil and the top of the can to act as a
> expansion buffer.
>

> The selection of oil can be a bit tricky. Transformer oil is
> usually recommended, but you have to be a little careful about it.
> Obtaining small quantities is not real easy, although some people
> have said that they can bum some off of the local utility company.
> In any case, make sure that the oil you obtain is not contaminated
> with PCBs (carcinogenic). This shouldn't be too much of a concern
> now, but if you stumble across a quantity of old oil, just beware of
> it.
>
> Note that almost all oils are flamable, including mineral oil
> (Mineral oil is just a petroleum oil, as opposed to a vegtable oil,
> both of which are flamable). I've heard some people use cooking
> oil, but I can't necessarily recommend that. One of the concerns is
> to make sure the oil does not oxidize or become rancid (You don't
> want to take the top off a year or two in the future and find either
> tar or a slimy smelly mess.). Thus, you may need to add an
> anti-fungal, anti-oxidization agent which has to be non-conductive.
>
> One of the other things you may think of is including a RF voltage
> monitoring tap to give you an idea of the power. Or, for the really
> complex version, you could mount a couple of thermistors on the can
> and measure the temperature rise to find the power being dissipated.
>
> Some of the other construction techniques I've seen involve
> paralleling a quantity of Carbon composition resistors. For
> example, paralleling 20 2-Watt 1K-Ohm Carbon composition resistors
> will result in a 50 Ohm, 40 Watt dummy load (Well, you have to be a
> little careful about the tolerance of the resistors to make sure the
> power balances out.). And, by immersing them in oil, and limiting
> the duty cycle, you can push it quite a bit higher than 40 Watts.
>
> Good luck with it. It sounds like a fun project (But, I bet you
> never thought something as simple as a dummy load could be so
> complex.). :*)
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>

>

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Before you buy.

2675. WTB: Homebrew cw/am xmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: rs2bk@aol.com
Message-ID: <20000330110945.15983.00000032@ng-cj1.aol.com>
Source record: 61780

Looking for a homebrew cw/am xmitter from the 40's,50,s
or 60,s. Mabe with a 6146 in the final, rack mounted?
What ever it may be, I may be interested.

Jim w9ud

2676. Re: No-code techies on 10 meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <38E383E5.CC49ADBB@NOSPAMwcom.com>
Source record: 61781

Yes, he is wrong. By international treaty all amateur radio operation below 30MHz requires a CW proficiently (after April 15, 5WPM). As more countries military and "Coast Guard" no longer requires CW, this may be eliminated from the treaty, but don't expect any thing for about 5 to 10 years. This seems to be the rough time frame the FCC makes major changes.

2677. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <38E3871A.3579B93@NOSPAMwcom.com>
Source record: 61782

Yes, but if you do you will HAVE to use a polarized plug and I would use
a Ground Fault circuit. You could drop the voltage with a divider also
I would put some sort of current limiter, i.e. a light bulb, before
everything but the fuse. This would fall into the same family as the
old AC/DC radios from the early 1960. An example is the Hallicrafters
S-120 and S-200. These did not use polarized plugs, but REALLY needed
one.

2678. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Mike <mike@nospam.com>
Message-ID: <AILE4.131148$bm.470272@news1.alsv1.occa.home.com>
Source record: 61783
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
news:US8wycAHVw44Ew6l@jmwa.demon.co.uk...
> <aOCE4.131056$bm.467685@news1.alsv1.occa.home.com>, Mike
> <mike@nospam.com> inimitably wrote:
> >It takes
> >work to increase the voltage on the new capacitor from 0 to 1V, and in an
> >ideal sense, this work is equal to the change in energy of the systm.
>
> No, it isn't. That's the point. If you assume zero resistance and
> inductance, the conservation equations E = CV^2/2 and Q = CV lead to
> different answers for the final voltage. That is the apparent paradox
> that needs explaining, and the explanation is that, even with
> superconducting components and lossless dielectrics there is always
> inductance.

But you're not including the work in your energy conservation equations. You can't change the potential on a charge without doing work on it, and you're changing potential here. Here's the way I see it:

From my physics text:

Energy on a capacitor: C * V^2 / 2

Work to charge a capacitor from 0 to V: Q * V/2, where Q is the total charge transferred, and V is the average voltage. Since Q = CV, the work is C * V^2 / 2 (the same as the energy of a capacitor charged to voltage V). In more general terms, the work required to change the charge on a capacitor from Q1 to Q2 is the integral of (q / C) dq over the range (Q1, Q2), which results in (Q2^2 - Q1^2) / 2C.

Here's our problem:

Initial energy in C1: C1 * V2^2 / 2

Work done to decrease voltage on C1 from V2 to V1: C1 * (V1^2 - V2^2) / 2

Work done to increase voltage on C2 from 0 to V1: C2 * V1^2 / 2

Final energy in C1: C1 * V1^2 / 2

Final energy in C2: C2 * V1^2 / 2

Total initial energy: C1 * V2^2 / 2

Total final energy: (C1 + C2) * V1^2 / 2

[Initial energy] + [Work] = [Final energy]

[C1 * V2^2 / 2] + [C1 * (V1^2 - V2^2) / 2 + C2 * V1^2 / 2] = [(C1 + C2) * V1^2 / 2]

Charge is conserved, and the sum of energy and work is conserved.

-- M --

2679. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: David Green <dgreen17@home.com>
Message-ID: <JZLE4.24007$a27.328233@news1.rdc1.mb.home.com>
Source record: 61784
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Mark Malloy wrote:
>
> Just what is the point behind this so-called "energy sucking" nonsense?
> There doesn't seem to be unusual behavior described here at all. The
> examples given here and on the website illustrate nothing more than
> basic principles of impedance matching, and their use in maximizing
> power transfer.
>
Bill Beatty wrote:

> > I don't quite understand why folks here have such
> > a problem believing that this can work (especially
> > when others here have posted material from texts
> > on antenna theory which show that the idea is
> > nothing exotic.)

Mark Malloy wrote:
>
> Just HOW exactly is it supposed to work? The claims you are making are
> rather vague. Exactly HOW MUCH power do you claim a small, lossless,
> resonant antenna can extract from a given propagating EM wave? (compared
> to say, the power available from a half-wave dipole.)

I really sympathize with Bill's difficulty in making his point...just look at Mark's objections: in the first case, he calls energy sucking "nonsense"..he
then immediately says that there's nothing unusual about it... and then he comes back and says, "How exactly is it supposed to work?"

I really don't know how Bill is supposed to deal with such scatter-brained attacks.
For the record, Bill's website gives a very good qualitative explanation of a fascinating phenomenon that very few experts in antenna theory are aware of. I myself have actually done the calculations, and the power available to an ideal, lossless, small resonant antenna is something like half the power that the corresponding half-wave dipole can aborb. This applies right down to the atomic level.

Martin Green

2680. Re: MIT flea, when? used to be Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <38E399C9.A4DC896E@software.com>
Source record: 61785

cmcnally@my-deja.com wrote:

> Can anyone tell me when this MIT flea is going on? I live near
> cambridge and would like pick up some stuff.
>
> thanks a lot
>
> chris

Chris:

Next MIT flea's the 16th of april; more info:

http://web.mit.edu/w1mx/www/swapfest.html
http://web.mit.edu/w1gsl/Public/ne-fleas

best regards,
ncc KB1DEJ

2681. Re: LM3900 - Obsolete

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8c0cq8klr1@nnrp1.deja.com>
Source record: 61786

In article <20000328224639.15531.00010174@ng-de1.aol.com>,
wandrangus@aol.com (WandrAngus) wrote:
> I just found out today that National Semiconductor is obsoleting my
favorite
> op-amp - the LM3900. This was an unusual device, a Norton amplifier,
with
> current-differentiating inputs which made is extremely easy to design
complex
> active filters with. Stock up now, lads, while any inventory remains.
>
> 73 - KC3ZQ
>

Then search with Newark, Wyle and Rochester Electronics. They seem to
have dozens.
--
Greetings,
Luiz - PY1LL

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2682. Re: Licensing Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000330153638.14369.00000076@ng-md1.aol.com>
Source record: 61787

>What level of license do I need to build a ham band R/C radio? This
>is all I ever envision using a amateur license for.

A technician class licence will allow you to operate model radio control transmitters on 50Mhz and above. Most ham RC activity is on 50Mhz. You still need to observe the "gentlemen's agreement" on which segment of the band to use for RC. Check in your area for any beacons, repeaters or other local use before picking your final frequency.

I've used 50Mhz, 144Mhz, and 220Mhz for RC models, but there is no commercial equipment (to my knowledge) for anything except 50Mhz. If you want to operate on the other bands, you'll have to roll your own.

Doug Moore KB9TMY (Formerly K6HWY)

2683. french repeaters lists

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: F6GKD <f6gkd@wanadoo.fr>
Message-ID: <8c0f61rfc1@wanadoo.fr>
Source record: 61788

Here the official french repeaters list : http://www.ref.tm.fr/cnrr

2684. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8e7iue.cls.root@radioactivex.lebesque-al.net>
Source record: 61789
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

David Green said some stuff about

>For the record, Bill's website gives a very good qualitative explanation of
>a fascinating phenomenon that very few experts in antenna theory are aware
>of. I myself have actually done the calculations, and the power available
>to an ideal, lossless, small resonant antenna is something like half the
>power that the corresponding half-wave dipole can aborb. This applies
>right down to the atomic level.
>

The question hasn't ever been "does blah blah.... work?", it's been
"how does blah blah work?" More specifically, it has to do with
the notion that the antenna actually has a greater flux through it
by attaching the resonant circuit (the "energy sucking" as it was
christened. If your calculation addresses that, it isn't apparent
and so far nothing has been suggested that would show any difference
to occur for any reason other than good-old impedance differences.
Depite lots of people, my self included, calling it a misunderstanding
of rather ordinary properties of E&M.

2685. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Mark Mallory <mark560@earthlink.net>
Message-ID: <38E3C6D3.49CDE72C@earthlink.net>
Source record: 61790
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

David Green wrote:

> I really sympathize with Bill's difficulty in making his point...

What exactly IS his point?

> just look
> at Mark's objections: in the first case, he calls energy sucking
> "nonsense"..he
> then immediately says that there's nothing unusual about it...

Learn to read, idiot. The term "energy-sucking" is *nonsense* precisely
BECAUSE there is no unusual phenomenon described here.

> and then he
> comes back and says, "How exactly is it supposed to work?"
>
> I really don't know how Bill is supposed to deal with such scatter-brained
> attacks.

What are you talking about? I'm asking how it's *supposed* to work
because he never QUANTITIVELY states how much power he expects to
extract from the thing; I'm only looking for clarification. And again,
if you *read* what I wrote you would see that I have no disagreement
with any calculations he's posted; I'm only trying to understand what
the point of it is. Do you understand why he keeps harping on this
subject? It seems that it's really nothing more than a rather tiresome
troll.

> For the record, Bill's website gives a very good qualitative explanation of
> a fascinating phenomenon that very few experts in antenna theory are aware
> of. I myself have actually done the calculations, and the power available
> to an ideal, lossless, small resonant antenna is something like half the
> power that the corresponding half-wave dipole can aborb. This applies
> right down to the atomic level.

Correct, but so what? The phenomenon is very familiar to anyone with
experience in antenna theory; it's widely understood (clearly; anyone
with a rudimentary understanding of the subject, even YOU apparently,
can verify the calculations). Again, there's nothing unusual going on
here.

You really seem like an immature little dweeb, David. Why would a
simple request for *clarification* (ie, a quantitative value for the
received power) be interpreted as an "ATTACK"??

2686. Re: High Voltage Feedthrough Caps forsale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: artky1k@ctel.net
Message-ID: <38e3cfba.6250668@news.northlandlink.com>
Source record: 61791
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Attn: W1AEL

You snet me an email with an invalid return address, my reply to you bounced. If you still have interest in these, please send me a valid reply address.

Art

On Sat, 25 Mar 2000 15:43:58 GMT, artky1k@ctel.net (K Sorter) wrote:

>I have 20 Cambion 1500 pf feedthrough caps forsale. These are gold
>plated and I've used them at 2,200 volts. I do not know what the upper
>voltage rating is.
>
>I have digital pictures, can send via email if you want to see them
>before buying.
>
>Best reasonable offer.
>
>Art
>
>PS:Contact promptly if you are interested on these as I will post on
>ebay if there is no interest via usenet.

2687. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <3fQE4.10494$OC2.285314@news2-win.server.ntlworld.com>
Source record: 61792
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Mark Mallory <mark560@earthlink.net> wrote in message
news:38E3C6D3.49CDE72C@earthlink.net...
>
> > I really don't know how Bill is supposed to deal with such
scatter-brained
> > attacks.

> What are you talking about? I'm asking how it's *supposed* to work
> because he never QUANTITIVELY states how much power he expects to
> extract from the thing; I'm only looking for clarification. And again,
> if you *read* what I wrote you would see that I have no disagreement
> with any calculations he's posted; I'm only trying to understand what
> the point of it is. Do you understand why he keeps harping on this
> subject? It seems that it's really nothing more than a rather tiresome
> troll.

No doubt he finds it as fascinating as I do.
I'm an EE with a physics degree, but never covered antenna theory. Besides,
there's a world of difference between a laser and the fact that the
mechanism was explained some 55 yrs previously by Einstein.

Maybe those people three or four decades back who kept harping on about the
wonders of masers and lasers were just tiresome trolls to the physicists who
had known of the mechanism for years.

Dirk

2688. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Leo Sgouros <lsgouro1@tampabay.rr.com>
Message-ID: <BgQE4.7997$Es3.29247@typhoon.tampabay.rr.com>
Source record: 61793
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

"Dirk Bruere" <artemis@kbnet.co.uk> wrote in message
news:3fQE4.10494$OC2.285314@news2-win.server.ntlworld.com...
>
> Mark Mallory <mark560@earthlink.net> wrote in message
> news:38E3C6D3.49CDE72C@earthlink.net...
> >
> > > I really don't know how Bill is supposed to deal with such
> scatter-brained
> > > attacks.
>
> > What are you talking about? I'm asking how it's *supposed* to work
> > because he never QUANTITIVELY states how much power he expects to
> > extract from the thing; I'm only looking for clarification. And again,
> > if you *read* what I wrote you would see that I have no disagreement
> > with any calculations he's posted; I'm only trying to understand what
> > the point of it is. Do you understand why he keeps harping on this
> > subject? It seems that it's really nothing more than a rather tiresome
> > troll.
>
> No doubt he finds it as fascinating as I do.
> I'm an EE with a physics degree, but never covered antenna theory.
Besides,
> there's a world of difference between a laser and the fact that the
> mechanism was explained some 55 yrs previously by Einstein.
>
> Maybe those people three or four decades back who kept harping on about
the
> wonders of masers and lasers were just tiresome trolls to the physicists
who
> had known of the mechanism for years.
>
> Dirk
>
>
>

he he

nice to see you well and strong, dirk

L

2689. Scan rate vs bandwidth and span

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38e3e33e.179669592@news.online.no>
Source record: 61794

I need to design a scanalyzer (like SB-620) or panoramic adapter
(German or European word for it) to be used on 9MHz ahead of IF filter

The bandwidth should be at least few hundred kHz wide after the ring
mixer of my FT-902.

it should be a formula for scan speed vs span and IF (and video)
bandwidth, possibly dependent on IF group delay

What is the optimum type of filters to use? The SB-620 wasn't
successful with Drake R-4C, this is likely to be that the VFO
(4.9-5.5) is too close to the IF (5.645), so an SBL-1 was used, and I
tried another IF with 4.43361875MHz color burst xtals

Perhaps it is an optimum sort of detectors, too, it may not be
critical, so even an old CA3089 works satisfactorily for the 40dB
dynamic range which seems more than enought for my purpose of just
seing where the activity is

I need to scan 28.0-28.4MHz to cover actual ssb/cw segment of 2m or
70cm, somewhat less for 1296 and higher bands
Believe AM bandwidth filter works satisfactorily for VHF, but might
not work for HF

on 30m the scan needs only to be 30kHz, but it is only cw signals,
smaller bandwidth can be used

Any suggestions?

73 es bcnu
jan-martin
LA8AK

2690. Re: Source of very flexible coax cable?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <38E41540.CFC9D86C@nettally.com>
Source record: 61845

The RG174 cable I have seen is very flexible and has a stranded center conductor. However this stuff has a loss of 31 dB/100' at 1 GHz. You will lose about 1 dB in a three ft length and because of ground plane inefficiency, and shadowing from the head your shoulder antenna will probably be less than unity gain, so count on the configuration being not better than about -7 dBd. Also be aware that you will need to fasten something to keep the dipole vertical at all times. Watch out for piano wire near the eyes.

Are you sure that your system can't work with an integral mounted antenna at hip level? For planning purposes, count on about -10 dBd for this configuration. May be much worse for close in crowding from other runners.

Mark Nelson wrote:

> Butch Magee wrote:
> >
> > how much does the transceiver weigh? the mic? the antenna? I think your
> > concerns are not real. Try Maxon or similar, everything is in the
> > headphones and will work great,...unless of course you intend to work DX.
> > Ahhhh.....the family radio thing with the headset and vox. Thats the
> > ticket, yeah, talk to your girlfriend like I do, yeah...thats it, ya' talk
> > to her naked.....!
> >
> > Butch
> >
>
> Actually this is a DATA radio, sending back physiological measurements.
> It already weighs too much at about 8 ounces, so it's going to be in a
> waist or fanny pack, whichever causes the least discomfort for the
> marathoner. The antenna is likely to be just a quarter-wave piano-wire
> spike at the end of the cable (maybe with a "bazooka" matching section
> if we can find light enough material).
>
> --
> Mark Nelson
>
> A collector of TV signal boosters and UHF converters -- God help me!
> http://www.geocities.com/TelevisionCity/Set/6312/

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come at you rapidly.

2691. Need copy of old Call Book Listing

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-30 00:00:00 UTC
From: Donald Smith <desmith@innercite.com>
Message-ID: <38E42D4F.CE00F1E4@innercite.com>
Source record: 61846
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy

Greetings all. I am trying to locate a copy of the proof needed to allow my pre-1987 Tech License to be upgraded to General. I have been told that a copy of the listing in an old call book would be acceptable. Any help or advice would be greatly appreciated. Thanks and 73's Don Smith KB6GQA.

2692. Military AM modulator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000330194406.08440.00000111@ng-cf1.aol.com>
Source record: 61847

I am still looking for a 25/30 watt modulation transformer..I have had no response..now I will try another approach... anyone have an old MD-7 ARC 5 modulator, it had a pair of 1625 tubes and a 28Volt dynamotor ,it also has a nice modulation transformer ..how about it? check out the barn and all the usual junk places.. got to be one out there some where..thanks Harold W4PQW

2693. Help - Mic on Icom Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: "John C. Ko" <n2fno@att.net>
Message-ID: <_qUE4.1708$TM.161789@bgtnsc06-news.ops.worldnet.att.net>
Source record: 61848

OMs,

Since I do not have SM series mic from Icom, it seems to be a little hard to find right desk mic for my Icom IC-738 Rig.

I tested various dynamic Mics from RadioShack and EV-621L, all produce very low sound quality (very low in tone and mic input).

Any good ideas without buying SM-8 for $ 190.00 ?

Please share your brilliant ideas.

JOhn
N2FNO
n2fno@att.net

2694. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Mike <mike@nospam.com>
Message-ID: <z_UE4.131852$bm.474173@news1.alsv1.occa.home.com>
Source record: 61849
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

"John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
news:US8wycAHVw44Ew6l@jmwa.demon.co.uk...
> <aOCE4.131056$bm.467685@news1.alsv1.occa.home.com>, Mike
> <mike@nospam.com> inimitably wrote:
> >It takes
> >work to increase the voltage on the new capacitor from 0 to 1V, and in an
> >ideal sense, this work is equal to the change in energy of the systm.
>
> No, it isn't. That's the point. If you assume zero resistance and
> inductance, the conservation equations E = CV^2/2 and Q = CV lead to
> different answers for the final voltage. That is the apparent paradox
> that needs explaining, and the explanation is that, even with
> superconducting components and lossless dielectrics there is always
> inductance.

John,

You're right, of course. I realized what you were saying about an hour after I fired off my last post, and although my analysis (in my other post) is correct in terms of energy and work, the thing missing is exactly what work is going on when you tie the two capacitors together. In the end, the work can be dissipated, radiated, or stored, but it has to show up as one of those three in any real circuit.

Damn good thing I didn't become a physicist.

-- M (glad that in engineering, this is just a theoretical question) --

2695. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <92VE4.477$W76.60918@typhoon1.gnilink.net>
Source record: 61850

Tom: This is "Ed". I changed my sign from K3FDY. In regard to the comment you query, I was referring to the 1 mtr. diameter Wellbrook loop. If short, dipole-probes null as effectively as a loop, and the sensitivity is equal, it seems to me that the dipole configuration would comprise a less obtrusive package and profile?

Additionally, where do I now find a ckt. for a "cascode" diff. amp.? And I thought life was going to be simple?

Thanks, Ed W.

Tom Bruhns wrote in message <38E25BEA.FD29BD1D@agilent.com>...
>Yeah, the two web references both look a whole lot more suitable for
>limited budget home construction than trying to do it with wide-band op
>amps. I would suggest putting back-to-back parallel diodes from each
>antenna terminal to ground, to protect against electrostatic
>discharges. ESD can degrade noisefigure of transistors without actually
>destroying them, and it would be good to keep the amplifier reasonably
>low noise.
>
>Seems to me (as a circuit designer) that it would be fun to play with
>turning that amplifier stage into a bootstrapped cascode, which can
>reduce the input capacitance by a whole lot and also make for very low
>distortion.
>
>I'm a little puzzled by your question starting, "I wonder why they...".
>In the circuit "CA" pointed to, the loop is optional. The primary
>configuration, as I read it, is a very short dipole.
>
>Cheers,
>Tom
>
>K3FDY wrote:
>>
>> Wow, thanks guys, I think that I have enough to get me started here.
>> The loop ckt. submitted by "CA" is interesting, plus the amp. uses the
>> venerable MPF102, my speed! I wonder if this kind of continuous,
>> single-turn, amplified loop isn't what "Wellbrook" uses, or would it
>> possibly need to be a low-Q, center-tuned loop to attain the upper bands
at
>> one meter diameter? Plus, I wonder why they, or someone else, didn't
just
>> go for the convenience of the E-field probes instead of the cumbersome
loop?
>> Thanks agn., Ed W.

>...

2696. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8c17vl$ih4$1@nnrp1.deja.com>
Source record: 61851
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

In article <slrn8e6eih.93j.root@radioactivex.lebesque-al.net>,
davids@david15.dallas.nationwide.net wrote:

> > Let's see. I recall pointing out that a small resonant
> > dipole develops a very strong local e-field because
> > the antenna intercepts incoming EM waves, then it
> > stores this energy in its LC circuit, and the stored
> > energy builds up over many cycles, resulting in a
> > high voltage across the LC circuit and an intense
> > e-field close to the antenna.

> What does "strong" mean?

I mean that the e-field near one antenna is "strong"
relative to the e-field nearby a similar short dipole
antenna which lacks a resonator. Or a "strong" e-field
relative to the e-field near a similar antenna which
does have a resonator, but where that resonator is tuned
far off from the frequency of incoming waves.

> Your definition of intercept is somewhat "non-
> traditional", since it involves intercepting
> more radiation than there is in the solid angle it's area
> subtends.

By "solid angle," I assume you mean that the vertex of
this conical region is to be placed upon the distant
transmitter? By "its area", do you mean the area of
a disk whose diameter is approximately the same as the
length of the small dipole? Or instead to you mean
the area of a disk of 1/4-wave radius? I don't have a
clear image of what you're describing, so I need a bit
more detail.

> The energy isn't stored over many cycles

We disagree on this, but let's save this part of the
discussion for later messages, if any.

> and
> a high voltage does not require that it be nor is a potential
> difference stated as a "high voltage" in any way sufficient
> to say anything about an electric field.

I speak of "high voltage" and "strong local e-field" in
the same breath because I'm comparing TWO antennas, as I

did on that webpage. Regarding those small capacitor plates
on http://www.amasci.com/tesla/nearfld1.html, if there
is 100V potential across those small plates on the right,
then the e-field at a particular spot near the plates
is approximately 100x higher than if the same plates
had only 1v across them. I describe a small resonant
dipole the same way: at resonance, the antenna must have
a "high" voltage, and a "strong" e-field, and off-resonance
it does not. You obviously don't agree. But at least is
my description clearer now?

> That description might as well be about a cuisinart.

Again with the insults. What's the problem? Do you act
so uncivil in real life as well, or is it only when
you are acting anonymously on newsgroups? If you can
take insults as well as dish them out, without flying
into blind rage, then that's different. But if you hate
it when others insult you, then I suggest you cut out
this immature "flamewar" crap. It's very unprofessional.

If you imagine that I'm INTENTIONALLY trying to
explain things in a mixed up way, and therefore it
makes you angry, then I don't know how to solve this
problem, because I'm simply talking, and I'm not
INTENTIONALLY trying to obscure anything.

I think one problem here is a language difficulty: I'm
speaking "electrical engineer", and another engineer
might understand it instantly, while to a physicist it
might sound like intentional gibberish or something.
But explosions of rage are not the solution.

> You've resisted all efforts to pin those things down
> unless everyone first agrees that you are correct.

What? This is silly. What I've RESISTED is responding
to **YOU**, since you keep bursting out in rage, and
angrilly telling me what my own thinking "really" must be,
or what my intentions must "really" be. And these things
are always something foul. (Are you familiar with the
term "projection" in psychology?)

Yet in reality, you have little knowledge of me, and
your negative fanticizing has little to do with me.
However, it certainly does give me an EXTREMELY low
opinion of your character, and it convinces me to avoid
talking to you. If this means that you've "won" this
"fight", then so be it. May you "win" many more such
"fights" in the same reprehensible way.

Others here have made good points, and I've responded to
them (for example, about reciprocity, and about the

reflectivity of "space cloth," and the need for small
antennas to be scatterers as well.)

> Since you cant make such claims
> based upon what you have provided, it's incorrect. It
> has nothing to do with resonant antennas until
> you provide enough detail to turn it into one.

Yet what I'm describing matches some of the information
provided by others, the stuff that came from the antenna
textbooks. We're not arguing about the particular wording
of explanations here. We're arguing about objective reality:
when a small resonant antenna is tuned correctly, is the
"effective area" far larger than the physical area of the
antenna? If you say no, then I must assume that you didn't
read those posts from the textbooks.

> > send me quotes from antenna-design texts describing their
> > common applications, then I ignore your arguments as
>
> At this point, I'm beginning to doubt you understand
> enough to comment. Or at least comment on something
> relevant.

And I think the same of you. One of the quoted textbooks
mentioned that the "effective area" of a lossless small
resonant antenna is L^2/(4pi) where "L" is one
wavelength. Yet that lossless antenna could be physically
100x smaller than a wavelength without changing the size
of the calculated effective area. Do you disagree with
this? If not, then look at the implications: the flow
of EM energy in that relatively large-diameter region
around the tiny antenna must somehow end up inside the
load resistor attached to the tiny antenna. Does the EM
energy magically vanish from space, only to appear in
that resistor? No, it must FLOW INWARDS: if we draw
progressively smaller spheres around that antenna, the
net-inwards flow of energy through the surface of each
sphere must be the same for each sphere. Agreed?
Therefore the watts/cm^2 very close to the tiny antenna
is far higher than the watts/cm^2 a couple of wavelenghts
away. Strength of e and b fields in EM waves is
directly proportional to the power density of the
waves, therefore the e and b fields very close to the
tiny antenna are far stronger than those in the undisturbed
EM waves several wavelengths away. And if the antenna
is 1000x smaller than a wavelength, the fields near
the antenna are that much stronger.

This stuff is TRIVIAL. If you have a physics degree, I
shouldn't even have to explain it, it should be instantly
obvious.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
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2697. Re: Help - Mic on Icom Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <zYUE4.14067$3g5.1350871@tw11.nn.bcandid.com>
Source record: 61852

John, ICOM builds a preamp into the mike, so most other mikes will give low output. If you can build or buy a preamp you can use them just fine. Heil makes a small amp for their mikes that would probably work with others, and there are various mike preamp circuits in the handbooks. +8V power is available at the mike connector for this purpose.

73, Carl WS7L

"John C. Ko" <n2fno@att.net> wrote in message news:_qUE4.1708$TM.161789@bgtnsc06-news.ops.worldnet.att.net...
> OMs,
>
> Since I do not have SM series mic from Icom, it seems to be a little hard to
> find right desk mic for my Icom IC-738 Rig.
>
> I tested various dynamic Mics from RadioShack and EV-621L, all produce very
> low sound quality (very low in tone and mic input).
>
> Any good ideas without buying SM-8 for $ 190.00 ?
>
> Please share your brilliant ideas.
>
> JOhn
> N2FNO
> n2fno@att.net
>
>
>

2698. Re: small-sig. diff. amp.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <8vVE4.1421$xv.108415@typhoon2.gnilink.net>
Source record: 61853

Christer, thanks agn:
I didn't know there was so much out there on the subject?
Even though some of the circuits may be a bit involved, they introduce aspects for consideration, like the center-tapped loop? Such as, if a center-tapped loop was used, why couldn't then maybe a simpler, "push-pull" amp. be used with a common source or emitter output?
Apparently if an IC, op. amp. is used as a diff. amp., there still needs to be a positive and a negative power source, whereas, with the two, balanced or diff. amp. circuits Christer presented, there is but a single polarity pwr. source?

Tom Bruhns: I forgot to acknowledge you comment on static maybe degrading FETs while not destroying them. I didn't consider that possibility? Some MOSFETs have built in diode protection apparently. A few picofarads of shunt capacitance can sure shoot-down the high-end freq. tuning range of a high Q resonant ckt., I have discovered. Is there any advantage of a "PIN" diode in terms of shunt capacity?

Ed W.

CA wrote in message ...
>Here's more:
>http://www.computerpro.com/~lyle/bal-pre/bal-pre.htm
>
>73
>Christer
>sm6pxj
>
>
>

2699. RADIOEXPEDITION on ALTAI

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: altai-es <altai-es@ukg.kz>
Message-ID: <8c1ete$m0i$1@mail.nursat.net>
Source record: 61854

What you think of idea of realization of radioexpedition on Southern Altai?

Southern Altai - highland is on the board of Kazakhstan, Russia, China and Mongoly.
Land of lakes and waterfalls, mountain taiga and stormy rivers, deserts and snowy peaks...
In time of Soviet Union this territory had been absolutelly inaccessible for foreign tourists (and furthermore for radioexpedition) - in locale
It is not enough of ham stations.

The base camp of expedition is planned to place in region by highest Fastigiums of Siberia and Altai of a mountain Belooha, lake Markakol and Zaisan.

If you were interested by our proposal, we can be found on ranges 21Mhz, 28Mhz call sign UN8JZZ (collective radio station)

email: altai-es@ukg.kz
phone: 8 (3232) 26 77 97
P.o. 243
Eastern Kazakhstan,
Ust-Kamenogorsk
M.Gorky Str. 21-314

Yours faithfully,
Kairzhan (UN7JJL)

2700. Active Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Dave <wsc3@NOSPAM.hotmail.com>
Message-ID: <38E49E58.BAB7B8CC@NOSPAM.hotmail.com>
Source record: 61855

I am going to build a active antenna for short wave listening. Does any one give me information and/or circuit diagram?

Thanks in advance.

73's
Dave.

2701. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <rXMvzYAArF54EwkY@jmwa.demon.co.uk>
Source record: 61856
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

<slrn8e7iue.cls.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>
> The question hasn't ever been "does blah blah.... work?", it's been
> "how does blah blah work?" More specifically, it has to do with
> the notion that the antenna actually has a greater flux through it
> by attaching the resonant circuit (the "energy sucking" as it was
> christened. If your calculation addresses that, it isn't apparent
> and so far nothing has been suggested that would show any difference
> to occur for any reason other than good-old impedance differences.
> Depite lots of people, my self included, calling it a misunderstanding
> of rather ordinary properties of E&M.

The two explanations ('energy-sucking' and 'impedance matching') are
really equivalent. You may *prefer* one or the other, but that **does
not** make one of them wrong.

It seems easier to *explain* in words how a ferrite rod antenna or the
'passive amplifier' work by considering 'field concentration' (the
result of the interaction of the transmitted field and that generated
locally by the device) rather than impedance-matching. You can draw
diagrams of 'lines of force' of the magnetic components of the fields.
Primitive but effective. But it is, I suspect, far more difficult to
calculate what happens using field concentration than it is using
impedance matching.

I am surprised not to get any reaction to the 'passive amplifier'. Maybe
everyone who doesn't believe it is going to build one first before
rushing to post? Unlikely, but....
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk
I wanted to make a fully-automated nuclear-powered trawler,
but it went into spontaneous fishing.

2702. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8c23de$5ik$1@uranium.btinternet.com>
Source record: 61857

It is often reported the SWR cannot be brought down to better than say 1.1 to 1 even when using an ATU.

If it is possible to obtain an SWR as low as that, then, by a very small readjustment of the ATU, 1 to 1 should be possible. So what's wrong ?

This is not necessarily due to a defect in the meter (the mechanical zero could be offset), or to a limited range of the ATU. It is highly unlikely 1:1 to 1 will occur at the exteme settings of L and C.

The problem is most likely due to the harmonic output content of the transmitter. It is impossible for an SWR bridge in an antenna system to be simultaneously at balance at the fundamental and all the harmonics.

A weakness of SWR bridges is, in effect, their very broad operating bandwidth. But when a noise bridge is used the radio receiver is not just the bridge balance detector, it is also the bandpass filter.

So the annoyance of the impossibility of obtaining a reading of 1 to 1 can be investigated by switching off the transmitter and using a noise bridge + receiver. And Bingo ! You might have had it all the time.
--
Regards, Reg.

2703. Re: FS:HP141 Spectrum Analyzer/accs/manuals

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Ron <W8ron@stratos.net>
Message-ID: <38E4B569.497226AA@stratos.net>
Source record: 61858
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.equipment,Cle.forsale,rec.radio.cb

Ron wrote:

> I have for sale an HP 141 Spectrum analyzer in good working order.
>
> Included are the LF and HF modules as well as the 1.2 GHz module.
> Manuals for the Mainframe , IF module and one RF module is included (I
> did not look but seem to recall it is the HF module)
> Asking $1,100 for the complete set plus shipping.
> Will offer a little better deal if you can pick it up.
> Pics available at http://members.stratos.net/w8ron/Hp141.html
> ---
> Ron

2704. Re: MWA220 data ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Dan Rae <rae4@ix.netcom.com>
Message-ID: <38E4C003.4E0AB23C@ix.netcom.com>
Source record: 61859

It's a 600 MHz hybrid
50 Ohm In/Out
10 dB gain
+10.5 dBm 1 dB compression
6.5 dB NF
25 mA supply current
3.2 Volts
Decoupling Imp 620 Ohms

Pin1 In 2 Out 3 Gnd

Flat to 800 MHz But SWR goes up above 600

That's about it
73
Dan

2705. Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8c2v6mdev1@nnrp1.deja.com>
Source record: 61860
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

David Green wrote:
> For the record, Bill's website gives a very good qualitative
> explanation of a fascinating phenomenon that very few experts
> in antenna theory are aware of.

I'm stunned. That makes about THREE people in all of these forums who actually grasp this simple idea. Are experts in antenna theory really so ignorant of this concept? I thought that I'd missed the idea in engineering school simply because I specialized in digital electronics rather than analog. But then I've never seen the antennas in portable AM radios explained in any magazines either, at least not in terms of anything except magnetic pickup coils.

A couple of people here have dismissed my messages as being obvious "self-promotion". Ah, I think they are confused.

How do I benefit by becoming the target of hundreds of newsgroup flamers? I certainly find this sort of controversy of value, but only for the very few people who refuse to descend to using ridicule, who are smart enough to see implications as well as concepts, and who can find the REAL flaws in my assertions.

Here is "self promotion":

BUY NOW! AMAZING ENERGY SUCKING ANTENNAS, ONLY $19.95!!!

Sorry, I'm not selling any. If people really want, they can visit SCIENCE HOBBYIST and shop for books in the bookstore. All profits go to support a local Seattle nonprofit science outreach company which gives science presentations in grade schools. There, now you can accuse me of "self promotion". If this draws attention to the bookstore and makes a few bucks for scienceclub.org, then it's worth the continuing derision.

If by "self promotion" they mean that I'm a blow-hard, then I gladly accept that lable. I started life as a total "brain" or "geek" or "reject." For this reason, my finally rising to the status of "newsgroup blowhard" is a fair achivement for me. If others here are in a similar situation, I suggest that they follow my lead and loudly flaunt their geek-hood. Recall the title of the second

Feynman anthology: WHAT DO *YOU* CARE WHAT OTHER PEOPLE
THINK?" See:

NERD/MISFIT RESOURCES
http://www.amasci.com/we-nerds.html

AMATEUR SCIENCE FORUM
http://www.amasci.com/sci-list/sci-list.html

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William J. Beaty SCIENCE HOBBYIST website
billb@eskimo.com http://www.amasci.com
EE/programmer/sci-exhibits science projects, tesla, weird science
Seattle, WA 206-781-3320 freenrg-L taoshum-L vortex-L webhead-L

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Before you buy.

2706. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: KD7FLE@yahoo.com
Message-ID: <38e4ffd4.14315045@news.teleport.com>
Source record: 61861

On Tue, 28 Mar 2000 05:50:47 GMT, "Carl Clawson"
<cclawson@transport.com> wrote:

>Great summary, Tom. Funny, the speedometer analogy was the same one that
>occurred to me.
>
<snipped a bit>

OK, how about something a little more basic; how do you use the
'standard' single meter SWR meter? I assume (always dangerous) that
you peak the forward reading , then switch to 'REV" and read the SWR
directly? Having never had anyone actually show me, I'm not sure.

Thanks, & Hi Carl :-)

73, Ken KD7FLE
Milwaukie, OR SOC# 254

2707. Re: Help - Mic on Icom Rig

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Edward Lewis <elewis@dsp.com>
Message-ID: <3ij9esk7h4skhmp2btojt65l5fq70mhoiq@4ax.com>
Source record: 61862

On Fri, 31 Mar 2000 02:53:46 GMT, "John C. Ko" <n2fno@att.net> wrote:

>OMs,
>
>Since I do not have SM series mic from Icom, it seems to be a little hard to
>find right desk mic for my Icom IC-738 Rig.
>
>I tested various dynamic Mics from RadioShack and EV-621L, all produce very
>low sound quality (very low in tone and mic input).
>
>Any good ideas without buying SM-8 for $ 190.00 ?
>
>Please share your brilliant ideas.
>
>JOhn
>N2FNO
>n2fno@att.net
>
>
A Heil HM 10 is $65 and the Heil Goldline is $140. I use the goldline
wiyh my ICOM 736
72 Ed KQ6DX

2708. Re: Need a "liquid plastic"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <LQ8F4.34069$1C2.1022960@news20.bellglobal.com>
Source record: 61863

Epoxy is good, can be drilled and tapped when hard.

2709. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ea7u9.lk2.root@radioactivex.lebesque-al.net>
Source record: 61864
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

John Woodgate said some stuff about
>
>The two explanations ('energy-sucking' and 'impedance matching') are
>really equivalent. You may *prefer* one or the other, but that **does
>not** make one of them wrong.
>
No. Simply because you can picture something in a certain
way and come up with a model doesnt make it correct. This
has nothing to do with an engineering model that reduces
an impractical fundamental description to a model from which
something may be constructed. They aren't equivalent and what
I "*prefer*" is thecorrect fundamental description. Being
right isn't a democratic process decided by voting. Preference
has nothing to do with it.

>It seems easier to *explain* in words how a ferrite rod antenna or the
>'passive amplifier' work by considering 'field concentration' (the

Easier doesn't make it a correct representation of the underlying
process - only a limiting case of it, recast to facilitate calculation.

>
>I am surprised not to get any reaction to the 'passive amplifier'. Maybe
>everyone who doesn't believe it is going to build one first before
>rushing to post? Unlikely, but....

Or maybe, from the "energy sucking" thread, trying to separate the
question of whether the device works from whether the explanation
is correct or what the limitations of the explanation might be
was deemed futile and therefore pointless.

2710. Re: Active Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: bertram <bcTRYSPAMholden@bellsouth.net>
Message-ID: <8N4F4.11651$uf1.27752@news1.mco>
Source record: 61865

click this URL and scroll down a bit.
http://www.elecdesign.com/magazine/1998/dec1498/ifd/1214id.shtml>

Dave <wsc3@NOSPAM.hotmail.com> wrote in message
news:38E49E58.BAB7B8CC@NOSPAM.hotmail.com...
> I am going to build a active antenna for short wave listening. Does any
one
> give me information and/or circuit diagram?
>
> Thanks in advance.
>
> 73's
> Dave.

2711. twisted pair cable - how to simulate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Bert Douglas <bertdNOSPAM@bellsouth.net>
Message-ID: <789F4.8490$Fk.135455@news2.mia>
Source record: 61866

Hi All,

How do I simulate cat 5 cable for the unbalanced transmission of NTSC video?

Thanks,
Bert Douglas

2712. Need a "liquid plastic"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Fred <fdecker@compuserve.com>
Message-ID: <8c2nor$k93$1@ssauraab-i-1.production.compuserve.com>
Source record: 61867

I want to fill holes in stripped plastic screw posts, then redrill them so that I can re-use the self tapping screws to hold circuit boards in. Can anyone recommend a good substance that might work? I thought about "plastic wood" or some kind of epoxy, but didn't want something too hard or too soft. Thanks.

--
Fred
N4IXL
ICQ:10254840
http://members.aol.com/fdecker

2713. FA: Outboard Digital Display on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <uq5F4.53$U3.4138@newsfeed.avtel.net>
Source record: 61868
Cross-posted to:
rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.shortwave

see it at: http://www.electronbay.com/lot.cfm?lotID=128

2714. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <0G6F4.852$hc7.18075@news2-win.server.ntlworld.com>
Source record: 61869
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Leo Sgouros <lsgouro1@tampabay.rr.com> wrote in message
news:BgQE4.7997$Es3.29247@typhoon.tampabay.rr.com...
>
> > No doubt he finds it as fascinating as I do.
> > I'm an EE with a physics degree, but never covered antenna theory.
> Besides,
> > there's a world of difference between a laser and the fact that the
> > mechanism was explained some 55 yrs previously by Einstein.
> >
> > Maybe those people three or four decades back who kept harping on about
> the
> > wonders of masers and lasers were just tiresome trolls to the physicists
> who
> > had known of the mechanism for years.
> >
>
> he he

> nice to see you well and strong, dirk

Thanks.
What brings you to these parts?

Dirk

2715. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38e52724.24788497@news.eunet.yu>
Source record: 61870
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2716. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: david@slack.com
Message-ID: <8c3ajk$4sh$1@spies.com>
Source record: 61871

In article <m2pushgsfj.fsf@russell.mb.jhu.edu>,
Prof. Ernst Niebur <niebur@russell.mb.jhu.edu> wrote:
>
>So, I picked up dual trace oscilloscope, a HP-1222A, at the Baltimore
>Hamfest. The price was very reasonable but it came without probes. It
>seems to be working alright; at least when I stick a paperclip in the
>connector I get a beautiful (distorted) 60Hz trace. So, I need to buy a
>probe. Four questions:
>
>1) I suppose I need to buy _two_ probes in order to
>be able to use both channels simultaneously, right?

You might find that you often hook up one channel to a low impedance source
(e.g. signal generator) and don't need a probe for it.

>2) I won't need a third probe for the ext. trigger; just a piece of
>coax with a BNC connector and two pieces of wire at the other end
>would work for that, right?

Normally.

>3) Where is a good place to buy scope probes? The vendor at the
>hamfest recommended probemaster but they don't list the HP-1222A.

The 1222A only has 15MHz bandwidth, so the probes are not very
critical. No point in paying ProbeMaster's prices (you would be
better off putting the money toward a better scope).

I have a list of low cost probe vendors:

http://www.spies.com/~dd/probes.html

>4) Should there be more than one probe available that works with this model,
>what should I pay attention to?

Just buy the cheapest.

>Sorry to bother the group with these questions but, of course, the
>scope came without manual and I could not find anything on the net
>(there is an oscilloscope-FAQ but it seems to be off-line, and HP does
>not even list the model any more on their www site).

The so called oscilloscope-FAQ only covers digital scopes so it
wouldn't help you.

However, Tektronix has a good app note called "The XYZs of Oscilloscopes":

http://www.tek.com/Measurement/App_Notes/XYZs/intro.html

2717. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8eae8r.lk2.root@radioactivex.lebesque-al.net>
Source record: 61872
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Science Hobbyist said some stuff about
>
> I mean that the e-field near one antenna is "strong"
> relative to the e-field nearby a similar short dipole
> antenna which lacks a resonator. Or a "strong" e-field
> relative to the e-field near a similar antenna which
> does have a resonator, but where that resonator is tuned
> far off from the frequency of incoming waves.
>
OK. So what? For two arbitrary dipoles, the fields will
have some relationship. Attaching components to them
changes the fields they produce. Construct them to have
any relationship you want. It doesnt change the incident
radiation.

> By "solid angle," I assume you mean that the vertex of
> this conical region is to be placed upon the distant
> transmitter? By "its area", do you mean the area of
> a disk whose diameter is approximately the same as the

By solid angle I mean exactly the definition of solid
angle. You can either orient the antenna to make that
simple or difficult, but I'll be satisfied with just
the physical area/4*pi*r^2, with the areal vector along
r.

> clear image of what you're describing, so I need a bit
> more detail.
>
Solid angle is described in countless math and physics
texts and is not an interpretable term.
>
> We disagree on this, but let's save this part of the
> discussion for later messages, if any.
>

Any energy stored over many cycles cant be useful as it
the information is averaged out. So it's irrelavent.

>
> is approximately 100x higher than if the same plates
> had only 1v across them. I describe a small resonant

V
------- ---------

```
======= <-- 100v ========= <--- 1V
------- ---------
0

V V
========= ===========
\ \
> 100 V 1 V
/ /
========= ===========
0 0
```

The field in both cases between the inner plates is smaller. In all of these, what is the field between the outer and inner plates? I've already mentioned this a zillion times. Fix the plate distance and use THAT capacitance to calculate what real field you get using real time relationships for the charges that appear. You cant pick and choose values and then gloss over. The argument is too sloppy to make difinitive statements about. You haven't yet shown the "small" plates are "small". In fact, "small" depends upon what you take the capacitance to be (and the fact that you have the area drawn differently for the outer and inner plates, means either "small" DOES NOT mean I can ignore fringing fields, or else you can fix it by drawing the plates the same size and stating that or you can fix that by considering ONLY the piece of the capacitor of the same area directly above and below as being in series. The balance of the area of the outer plates is in parallel and "small relative to the big plates" depends upon the initial decision for small which must be consistent with the ratio you choose. I've already said all of this. You cant pick and choose the independent paramaters at will and state the situations that produce them are equivalent and physically realizable. Before you try and call these equivalent, make them PHYSICALLY equivalent to the same antenna. Then, it won't be neccesary to go back to square 1 everytime you assume something. If you cant produce a realistic configuration that pins down EVERYTHING now, then you certainly wont be able to do it further on. Calculate the capacitances by plate area and separation distance. Provide capacitances and fields in terms of sizes so that you don't make assumptions that are based upon physically unrealizable geometries or electrical characteristics that require them.

> dipole the same way: at resonance, the antenna must have
> a "high" voltage, and a "strong" e-field, and off-resonance
> it does not. You obviously don't agree. But at least is
> my description clearer now?

No. Redraw the entire thing with plate sizes. Since the capacitance depends upon that, so do the ratios and so do the fields. I don't know how many times I have to say that the outer plates don't matter for any real result. You can make them matter, but not if you want

to arbitrarily choose ratios of your capacitances and voltages and
have them represent the same antenna as you've implicitly assumed.

> Again with the insults. What's the problem? Do you act
> so uncivil in real life as well, or is it only when

Hard to say. I've never had anyone refuse to describe something
they were trying to describe. Everyone that has ever asked me
about something without knowing enough details to provide the
answer they've wanted has responded to being told what was missing
either by filling in the necessary information or realizing that
once they knew the information wasn't complete, answered their
own question. Just guessing, I'd probably be at least as uncivil
after repeatedly telling them why they don't have a complete
description and having them repeatedly restate the same incomplete
question.

> this immature "flamewar" crap. It's very unprofessional.
>
I'm not a professional. I do it for free.

> might sound like intentional gibberish or something.
> But explosions of rage are not the solution.
>
See it however you wish. I don't see being blunt as flying
into a rage. I see it as an appropriate way to respond to
stubborness for the sole reason of being stubborn. You've
had explanations in practically every terminology imaginable.
I personally addressed the topic in exactly the terms you
provided, but when it becomes inappropriate to use voltages
because charges are what matters for what you've provided,
that's the breaks. As the poster that correctly resolved
the so-called capacitor paradox (without invoking unstated
features), the energy may be given by either q^2/2C or
by CV^2/2, but the right answer depends upon recognizing
whether you know q or V.

> to **YOU**, since you keep bursting out in rage, and
> angrilly telling me what my own thinking "really" must be,
> or what my intentions must "really" be. And these things

You think there's a book deal in it or something?
Get over it.

> are always something foul. (Are you familiar with the
> term "projection" in psychology?)
>
If I'm interested in knowing, I'll check a psychology
newsgroup. This is a physics newsgroup. Provide physics
as asked raather than opportunities to go off on
tangents.

> opinion of your character, and it convinces me to avoid

I don't care what you think about my character. I only
care if you provide a correct description of a problem
so that it lends itself to a correct and unambiguous
result.

> Others here have made good points, and I've responded to
> them (for example, about reciprocity, and about the
> reflectivity of "space cloth," and the need for small
> antennas to be scatterers as well.)
>
No, you haven't responded to anything that didn't allow
you to introduce additional ambiguity.

> of explanations here. We're arguing about objective reality:
> when a small resonant antenna is tuned correctly, is the
> "effective area" far larger than the physical area of the

Not so long as you wont place the proper constraints on
your description you aren't.

> antenna? If you say no, then I must assume that you didn't
> read those posts from the textbooks.

I can quote anything and remove the context to support anything
at all.
>
> And I think the same of you. One of the quoted textbooks

Fine. Take a vote and see whether the consensus thinks so.
Sure, it doen't prove anything, but I'd venture to say
it's more objective than your opinion.

> This stuff is TRIVIAL. If you have a physics degree, I
> shouldn't even have to explain it, it should be instantly
> obvious.

What's obvious is that leaving enough degres of freedom with
different ones being implicit at fifferent times let's you
claim anything down the road. Remove anything implicit.
There's no garauntee "small" means anything without some
constraint on it.

2718. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <38E54D64.521AE76C@dialpoint.net>
Source record: 61873

This sort of thing should be on the test..

There are 2 ways that I do it. If I can change the output power of the rig I set the swr pot to the most sensitive position. Then set the transmitter to the lowest power, transmitt a carrier and bring the power up tuil the meter is at full scale, then switch to the reverse position. If I can not vary the output in a smooth way, I put the transmitter on the lowest power I can and then use the pot on the swr meter to get the meter to full scale, then switch to reverse to read the swr. The transmitter can be set to full power, but that creats more 'trash" on the band.

Sometimes the swr will appear to change if low power vers high power is used. There are basically 2 reasons for this. One is the transmitter is generating power (harmonics) at other than the carrier frequency and the antenna is not matched for the harmonic. The other reason is the diodes that is used in the swr bridge are not linear for various power levels.

> OK, how about something a little more basic; how do you use the
> 'standard' single meter SWR meter? I assume (always dangerous) that
> you peak the forward reading , then switch to 'REV" and read the SWR
> directly? Having never had anyone actually show me, I'm not sure.
>
> Thanks, & Hi Carl :-)
>
> 73, Ken KD7FLE
> Milwaukie, OR SOC# 254

2719. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Allan Henry Kaplan <w1aeljunkfilter@mindspring.com>
Message-ID: <38E56765.48652F69@mindspring.com>
Source record: 61874

As you have no doubt noticed, most of your responders do not believe this idea is safe. If you package the circuitry in a nonconductive (sturdy plastic) box with NO METALLIC PROTRUSIONS, it can be just as hazardous as a table lamp. Does that frighten anybody? You can use a half-wave rectifier consisting of a 400 (minimum) PIV diode and a filter capacitor. Sizing the capacitance on the skimpy side so that the relay coil's current prevents the DC from rising to the peak AC voltage will eliminate the need for a dropping resistor. The required capacitance will depend on the load current, so I cannot tell you how many microfarads you need. You need just enough to allow relay pull-in without buzzing or chattering. The dc voltage will rise to about 150V when you switch off the coil, but will drop like a rock when loaded. This is as simple and crude as it gets, but a 10 - 50 ohm resistor in series with the fuse you should include ahead of the diode would be a good idea. It would limit inrush current. Using a suitably chosen bleeder resistor would improve the lousy regulation, but will dissipate some heat. If you are careful in your implementation, you can build something safe with out a transformer. Good luck.
Allan, W1AEL

2720. Re: High Voltage Feedthrough Caps forsale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Allan Henry Kaplan <w1aeljunkfilter@mindspring.com>
Message-ID: <38E570C2.6C3CB29@mindspring.com>
Source record: 61875

Art, you figured out my return address, but perhaps you weren't aware that mony of us usually "mess-up" the return address in the message header when we post to newsgroups. The usual practice is to use an address such as w1ael@NoSpammindspring.com. That fools the stupid robot programs that harvest email addresses for junk email spamming purposes. I decided to use a different junkfilter just in case the fiendish robot-rogrammer got smart enough to recognize the very common "NoSpam" spoof.

Can we deal?
73, Allan.

2721. Re: 2N3053 Replacement with better power dissipation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Allan Henry Kaplan <w1aeljunkfilter@mindspring.com>
Message-ID: <38E57870.108DBFF4@mindspring.com>
Source record: 61876

Curtis, A higher power transistor will NOT dissipate any less power
than the 2N3053 for the same level of output power! The physical and
electronic laws are no different in that respect for higher power
devices. Apart from the "bigger silicon", the higher power transistor
would be in a package that can transfer more heat to a suitable external
heat sink --which you would need to supply. It runs only slightly
cooler because of its larger mass, but you must still provide a suitable
thermal path to carry the heat away. What you need to do is provide a
more effective means of removing the heat from your transistor. I am
not familiar with the 2N3053, but being QRP, I would guess it might be
in a small metal case. I believe it needs a heat-sink, but you cannot
afford to greatly increase its capacitance to ground. A good approach
might be a small clip-on sink with a small fan blowing on it. It does
seem a bit wierd to need a fan in a QRP rig though! Hope this helps.
73, Allan.

2722. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Allan Henry Kaplan <w1aeljunkfilter@mindspring.com>
Message-ID: <38E57A3A.329431C3@mindspring.com>
Source record: 61877

At the ten-watt level with the mighty TR7 (I love mine!), there is absolutely NO need for concern with a measly 3:1 SWR! I sure do not know what could be causing it except for a squirrel in the attic swinging on your antenna, and I can understand your curiosity, but put all worry out of your mind. That level of SWR with the short feedline you must have for an attic antenna will make not a particle of difference to either the rig or the signal you emit. Be happy, don't worry, enjoy your hobby!!
73,
Allan, W1AEL since 1954.

2723. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <oAhF4.50651$17.1103151@news4.giganews.com>
Source record: 61878

Sounds like a problem with the SWR indicator. Perhaps it's getting warm and losing isolation. Open the unit and see what's going on there.

I have three SWR indicators in line at all times and they don't quite agree. The one that is the poorest is in the MFJ 986 tuner. It utilizes a cross needle meter that is poorly calibrated. Further, the rf sampling toroid has poor insulation and gives erratic readings some of the time.

Try another SWR indicator and make a comparison. I don't imagine anything in the antenna system itself is changing.

73, Bob K6DDX

2724. Re: High Voltage Feedthrough Caps forsale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E5AC72.24C6880E@eznec.com>
Source record: 61879

The general recommendation for munging return addresses is to munge the domain name rather than the user name (after making sure the munged domain name isn't actually valid). The reason is to prevent the spam from reaching your domain and requiring the domain to process and reject it.

Of course, when you munge the user name instead of the domain name, you're not causing the domain any greater a burden than those of us who don't munge at all.

Roy Lewallen, W7EL

Allan Henry Kaplan wrote:
>
> Art, you figured out my return address, but perhaps you weren't aware
> that mony of us usually "mess-up" the return address in the message
> header when we post to newsgroups. The usual practice is to use an
> address such as w1ael@NoSpammindspring.com. That fools the stupid
> robot programs that harvest email addresses for junk email spamming
> purposes. I decided to use a different junkfilter just in case the
> fiendish robot-rogrammer got smart enough to recognize the very common
> "NoSpam" spoof.
>
> Can we deal?
> 73, Allan.

2725. Re: Rocket DME/Telemetry...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-03-31 00:00:00 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <38E4E72E.DF31805C@umich.edu>
Source record: 61880

Paul Breed wrote:
>
> The group at:
> http://www.space.com/space/launches/cats_launch_000328.html
>
> Is trying to measure the altitude of a Rocket using GPS.

I recall a circuit in a major electronics magazine a few years ago that employed an atmospheric pressure sensor and a microprocessor to log the readings into RAM. After the flight, you simply download the flight profile into your PC and convert the pressure readings to altitude. The processor kept time stamps, too, of course. How accurate is barometric altitude determination? Seems like it would be as good as any of the other methods mentioned, and would cover a much greater max height. Just guessing, there, however.

if anyone's interested in the article, email me and I'll dig up the original citation.

Bob, KI8AB

2726. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ec685.mkk.root@radioactivex.lebesque-al.net>
Source record: 61795
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate said some stuff about

>V has 2 joules of energy. When we finish up, IF we do, with two 1 F caps
>charged to 1 V, the total energy is only 2 x 1/2 = 1 J (joule).
>
>Where did the missing 1 J go? That's the paradox.
>>

What is the expression for the potential energy required
to assemble charges? Yes, it requires doing work to move
them. The reference point is typically infinity. The person
you are responding to has the correct answer.

>Well for the *practical* case, you don't need any complex math. There
>MUST be some resistance, and the missing joule goes to heat it up. For

Nonsense. In that case, even more would be lost. What is:

\integral F\cdot dl = q \integral E\cdot dl

If you move a charge, with no resistance, no dielectric,
no "practical" contrivances, what is the work done, in
taking charge q sitting a distance d from charge Q along
a simple straight line from point d to point d+x?

>energy *may* be radiated away from the oscillating circuit, so that
>eventually the oscillation dies out and the capacitor voltages then do
>become equal - at zero!
>
>While we do know that resistance of wires can be eliminated by using
>superconductors, we do not know that lossless dielectrics (e.g. a
>'perfect vacuum') can exist and we do not know how to eliminate all
>inductance from any circuit, however small.

Which doesn't have anything to do with this problem. If
q^2/2C and CV^2/2 don't give the same results, then there
is a physical reason. In this case, charge didn't disappear
but work was done. Which is likely to be the proper form
here?

2727. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Robert <romapa@earthlink.net>
Message-ID: <38E61F9E.D46B45BE@earthlink.net>
Source record: 61796
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate wrote:

> <38E59631.4B4AD8C7@entheosengineering.com>, Rich Grise <off-
> duty@entheosengineering.com> inimitably wrote:
> >Hey, kids, I used to think I knew something about electronics,
> >but this thread is confusing the hell out of me. Wouldn't a
> >1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
> >have 0 coulombs of charge, and when you connect them together,
> >doesn't one coulomb go into the other cap, such that they're
> >both at 1v now? (of course, this is in a perfect lossless
> >circuit.) I'm thinking of two coffee cans with spigots and
> >a hose; doesn't it work that way?
>
> You have used Q = CV (conservation of charge Q) to get your result. Now
> look instead at E = CV^2/2 (conservation of energy E). The 1 F cap at 2
> V has 2 joules of energy. When we finish up, IF we do, with two 1 F caps
> charged to 1 V, the total energy is only 2 x 1/2 = 1 J (joule).
>
> Where did the missing 1 J go? That's the paradox.

Who says this is a paradox?!!! And I am tired of hearing about that same old hackneyed junk explanation of interconnecting wires having non-zero resistance. Don't you suspect anything at all when you lose exactly 0.5000000.... of your initial energy? Bit of a coincidence don't you think?-even odder when it results from an fairly indefinite specification of the existence of something. This is a hypothetical set-up and it should be explained by pure analysis. Does the operational calculus help us with this? Well, I should say no if you're constrained to working with garden hoses and golf balls! Is western civilization the only one relying upon promulgating a deceitful fiction for education?- the end justifies the means?

2728. FS: National/HRO dial and gearbox

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000401122808.08158.00000266@ng-fp1.aol.com>
Source record: 61797

This is the dial with the numbers in the windows. Includes right angle gearbox with dual output shafts. $50 for the pair.

73

Evan

2729. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: James Meyer <notjimbob@earthlink.net>
Message-ID: <04eces0db72v8l7rlro6je8e5fkujunu7q@4ax.com>
Source record: 61798
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

On Sat, 01 Apr 2000 00:24:49 -0600, Rich Grise <off-duty@entheosengineering.com>
wrote:

>Hey, kids, I used to think I knew something about electronics,
>but this thread is confusing the hell out of me. Wouldn't a
>1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
>have 0 coulombs of charge, and when you connect them together,
>doesn't one coulomb go into the other cap, such that they're
>both at 1v now? (of course, this is in a perfect lossless
>circuit.) I'm thinking of two coffee cans with spigots and
>a hose; doesn't it work that way?
>
>Apparently I haven't got enough complex math or calculus
>to understand what's *actually* going on.

That's an excellent analogy. Two coffee cans with a pipe connecting
them at the bottom and a valve in the middle of the pipe. One can has two
pounds of water in it and the other one is empty. Open the valve and soon each
can has one gallon of water in it. The quantity of water is conserved just like
the quantity of charge in the caps.

Now consider what amount of work you could get out of the can with two
pounds in it, if you let the water out from the bottom to drive a water wheel,
as compared to the amount of work you could get out of both cans when they each
have one pound.

Since the pressure at the bottom of the can with two pounds in it is
higher than the pressure would be if it had only one pound, you get a lot more
work from the one pound of water that comes out first than from the one pound
that comes out last.

The amount of energy stored in the two pound can is greater than the
amount of energy stored in two, one pound cans. Where did the extra energy go?
The amount of water didn't change.

Jim

2730. FAST PCB prototypes for $26

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: tusunov@my-deja.com
Message-ID: <8c5lt2$8b8$1@nnrp1.deja.com>
Source record: 61799

check http://run.to/pcb

no setup fees!
free panelization!
free cut to border!

FR-4 - 1.6mm, 160x100mm (6,3x3,9") for only 26,00 USD
Double side, PTH, Solder mask, Component mark
Shipment in 3-5 working days !

Sent via Deja.com http://www.deja.com/
Before you buy.

2731. WTB: NOS Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: BlueStrat <bluestat@erols.com>
Message-ID: <38E6700C.9E232AF4@erols.com>
Source record: 61800

Looking for large or small quantities of the following NOS (preferably
in
original boxes) tubes.

6V6GT, 6L6GC,EL37, 5AR4/GZ34, 5Y3GT, 5R4, 5V4, 6K6GT, 6CA7/EL34,
6BQ5/EL84, 7189A, 7027,
7591A, 7581A, 12AX7A/ECC83, 5751, 12AY7/6072, 7025, 12AT7, 7199, 5881,
6550,
7868, KT-66,77,88.

Also, octal socket extenders/savers.

Please list brand, price, qty available, and whether in
original box.

Thanks,
Mike
703-430-8713
bluestat@erols.com

2732. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38e67a2b.21618022@news.eunet.yu>
Source record: 61801
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

2733. HAM RADIO RESOURCES

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: F6KEH <f6keh@qsl.net>
Message-ID: <8c63f2$ig2$3@wanadoo.fr>
Source record: 61802

Ham radio site :
F6KEH RESOURCES RELAY has been updated !

Visit it at : http://www.f6keh.free.fr/index_r

2734. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38E68397.63307537@entheosengineering.com>
Source record: 61803
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Hmm - is this something like, for the circuit to be critically
damped, the resistance has to dissipate the other Joule? Or
if it's the theoretical superconducting circuit with perfect
dielectrics, it's radiated as EM energy?

That does kind of make sense.

Thanks!
Rich

John Woodgate wrote:
>
> <38E59631.4B4AD8C7@entheosengineering.com>, Rich Grise <off-
> duty@entheosengineering.com> inimitably wrote:
> >Hey, kids, I used to think I knew something about electronics,
> >but this thread is confusing the hell out of me. Wouldn't a
> >1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
> >have 0 coulombs of charge, and when you connect them together,
> >doesn't one coulomb go into the other cap, such that they're
> >both at 1v now? (of course, this is in a perfect lossless
> >circuit.) I'm thinking of two coffee cans with spigots and
> >a hose; doesn't it work that way?
>
> You have used Q = CV (conservation of charge Q) to get your result. Now
> look instead at E = CV^2/2 (conservation of energy E). The 1 F cap at 2
> V has 2 joules of energy. When we finish up, IF we do, with two 1 F caps
> charged to 1 V, the total energy is only 2 x 1/2 = 1 J (joule).
>
> Where did the missing 1 J go? That's the paradox.
> >
> >Apparently I haven't got enough complex math or calculus
> >to understand what's *actually* going on.
>
> Well for the *practical* case, you don't need any complex math. There
> MUST be some resistance, and the missing joule goes to heat it up. For
> the *ideal* case of superconducting wires and lossless capacitor
> dielectrics, the energy oscillates continuously between the capacitors
> and the stray inductance of the circuit, and to prove that you do really
> need to understand differential equations. The voltages across the
> capacitors DON'T end up at 1 V each, they change continuously, and the Q
> = CV equation isn't applicable in that simple form. In addition, some
> energy *may* be radiated away from the oscillating circuit, so that
> eventually the oscillation dies out and the capacitor voltages then do
> become equal - at zero!

>
> While we do know that resistance of wires can be eliminated by using
> superconductors, we do not know that lossless dielectrics (e.g. a
> 'perfect vacuum') can exist and we do not know how to eliminate all
> inductance from any circuit, however small.
> --
> Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
> Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
> automated nuclear-powered trawler,but it went into spontaneous fishing.
> PLEASE do not mail copies of newsgroup posts to me.

2735. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38E6857C.692FE80F@entheosengineering.com>
Source record: 61804
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Yeah, that darn 2nd-order term screws everything up! All the electrons
are still there, and Q=CE still holds, (where Q == charge, C ==
capacitance,
and E == voltage), but the energy is different because somehow 1 Joule
of
work got done, is that it?

I accidentally started a flame war once, which some of you might
remember,
about using a 115V bulb on a 230V line by just half-wave rectifying it.
Got egg on my face when I did it on a spreadsheet and found out that
the power would be 1.4 times the power of running the 115V bulb on 115V.

Maybe I should stick with digital electronics and programming. :-)

Cheers!
Rich

James Meyer wrote:
>
> On Sat, 01 Apr 2000 00:24:49 -0600, Rich Grise <off-duty@entheosengineering.com>
> wrote:
>
> >Hey, kids, I used to think I knew something about electronics,
> >but this thread is confusing the hell out of me. Wouldn't a
> >1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
> >have 0 coulombs of charge, and when you connect them together,
> >doesn't one coulomb go into the other cap, such that they're
> >both at 1v now? (of course, this is in a perfect lossless
> >circuit.) I'm thinking of two coffee cans with spigots and
> >a hose; doesn't it work that way?
> >
> >Apparently I haven't got enough complex math or calculus
> >to understand what's *actually* going on.
>
> That's an excellent analogy. Two coffee cans with a pipe connecting
> them at the bottom and a valve in the middle of the pipe. One can has two
> pounds of water in it and the other one is empty. Open the valve and soon each
> can has one gallon of water in it. The quantity of water is conserved just like
> the quantity of charge in the caps.
>
> Now consider what amount of work you could get out of the can with two
> pounds in it, if you let the water out from the bottom to drive a water wheel,
> as compared to the amount of work you could get out of both cans when they each

> have one pound.
>
> Since the pressure at the bottom of the can with two pounds in it is
> higher than the pressure would be if it had only one pound, you get a lot more
> work from the one pound of water that comes out first than from the one pound
> that comes out last.
>
> The amount of energy stored in the two pound can is greater than the
> amount of energy stored in two, one pound cans. Where did the extra energy go?
> The amount of water didn't change.
>
> Jim

2736. Need copy of old Call Book Listing for 1986-87

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Donald Smith <desmith@innercite.com>
Message-ID: <38E6CF57.F42592BC@innercite.com>
Source record: 61805
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.policy

Donald Smith wrote:

> Greetings all. I am trying to locate a copy of the proof needed to
> allow my pre-1987 Tech License to be upgraded to General. I have been
> told that a copy of the listing in an old call book would be
> acceptable. I originaly had a Novice and upgraded in 1985/86 to
> Technician. I believe I had another Call Sign while holding my Novice
> ticket. Does any of the call books contain cross references by City or
> Address? Any help or advice would be greatly appreciated. Thanks
> and 73's Don Smith KB6GQA.

2737. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: KD7FLE@yahoo.com
Message-ID: <38e52333.23371843@news.teleport.com>
Source record: 61881

I am NOT a licensed electrician, but I've worked for supply houses and

electrical equipment manufactures for about a dozen years. These are
my OPINIONS only, and do not represent the opinions of who I work for.

OK, now that the weasel words are out of the way, the way *I*
interpret the NEC is that if you shack is a seperate building, it
needs to have a 'service disconect' (breaker or fused switch that is
UL listed as service equipment) and a seperate ground. Further
the ground and the Neutral must be bonded (tied together). The ground
from the house should not even go to the shack.

In pratice, a small outbuilding is often feed from the house, and is
NOT viewed as a sepereate service by the local inspectors. In that
case, I would use the shack ground rod as a RF ground, and NOT tie
it to the house service. This is really up to your local inspectors
judgement.

Clear as mud, right?

On Thu, 30 Mar 2000 00:56:59 -0800, W2EB
<n2tpaNOn2SPAM@juno.com.invalid> wrote:

> I know the three main purposes of grounding: Lightning
>protection, safety from "hot chassis", and RF reduction. How do
>these grounds interconnect? Do these grounds interconnect?
> My shack is a separate building about 100 ft. from the
>house fed by 120V three wire (hot, neut, and ground). I have a
>ground rod driven at the shack. Do I want to tie that ground to
>the house ground that enters my shack? I fear that a lightning
>strike at the shack will be more likely to do damage in the house
>if I tie them together. Leaving them separate will still leave
>the Power supply tied to house ground for safety, and leave the
>P.S. minus line (and all equipment chassis other than the P.S.)
>tied to shack ground to divert lightning energy. The NEC isn't
>clear on this, as it can either treat my shack as just another
>room of my house, or a separate building that needs it's own
>grounding system.
> Otherwise, I assume that lightning and RF grounds are very
>similar in construction and must be bonded at the ground rod.
> Anyone have any thoughts? Any electricians out there?
>
>73,
>
>Bill
>W2EB

>
>* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
>The fastest and easiest way to search and participate in Usenet - Free!
>

73, Ken KD7FLE
Milwaukie, OR SOC# 254

2738. SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38e5606c.1716598@news.mindspring.com>
Source record: 61882

Ok, I know that this is a homebrew group, but most here seem pretty constructive and I need some Elmering. I'll give some details and then pose a question. Thanks in advance.

Drake TR-7, less than 1 year out of rehab at Drake.
MFJ-941E Versa-tuner II with SWR meter.
10-15-40m dipole in attic.
CW on 21.140 mHz at ~10 watts output.

The question: After ragchewing at 5-8 WPM on CW for an hour, the SWR as measured by the tuner showe a huge rise, up to around 3:1. The other station noticed no change in strength or character of the signal. Could it be a fault in the meter, or what? Oh, yeah, the tuner doesn't require too much in the way of capacity or inductance to tune the antenna. The MFJ-207 SWR "detector" was used to set the tuner and shows less than 1.2:1. Anybody got any ideas?

Russ Nixon
Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2739. Its April 1

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: ronber@one.net.au
Message-ID: <38f065e8.7850847@news.one.net.au>
Source record: 61883

Last chance to get your comfort microphone
Just for fun on April 1
http://members.xoom.com/micsound
Make sure you email the inventor of this
astonishing device.
Link at the bootom of the page

2740. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8eb0j2.lk2.root@radioactivex.lebesque-al.net>
Source record: 61884
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist said some stuff about
>
> How do I benefit by becoming the target of hundreds of
> newsgroup flamers? I certainly find this sort of

You could be into abuse.

> controversy of value, but only for the very few people
> who refuse to descend to using ridicule, who are smart
> enough to see implications as well as concepts, and who
> can find the REAL flaws in my assertions.
>
The 3 afforementioned individuals, I take it.

> BUY NOW! AMAZING ENERGY SUCKING ANTENNAS, ONLY $19.95!!!
>
Well, it's probably still a better deal than windows. At least
no rebooting is required.

2741. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38E59631.4B4AD8C7@entheosengineering.com>
Source record: 61885
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Hey, kids, I used to think I knew something about electronics,
but this thread is confusing the hell out of me. Wouldn't a
1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
have 0 coulombs of charge, and when you connect them together,
doesn't one coulomb go into the other cap, such that they're
both at 1v now? (of course, this is in a perfect lossless
circuit.) I'm thinking of two coffee cans with spigots and
a hose; doesn't it work that way?

Apparently I haven't got enough complex math or calculus
to understand what's *actually* going on.

Thanks!
Rich

Mike wrote:
>
> "John Woodgate" <jmw@jmwa.demon.co.uk> wrote in message
> news:US8wycAHVw44Ew6l@jmwa.demon.co.uk...
> > <aOCE4.131056$bm.467685@news1.alsv1.occa.home.com>, Mike
> > <mike@nospam.com> inimitably wrote:
> > >It takes
> > >work to increase the voltage on the new capacitor from 0 to 1V, and in an
> > >ideal sense, this work is equal to the change in energy of the systm.
> >
> > No, it isn't. That's the point. If you assume zero resistance and
> > inductance, the conservation equations E = CV^2/2 and Q = CV lead to
> > different answers for the final voltage. That is the apparent paradox
> > that needs explaining, and the explanation is that, even with
> > superconducting components and lossless dielectrics there is always
> > inductance.
>
> But you're not including the work in your energy conservation equations. You
> can't change the potential on a charge without doing work on it, and you're
> changing potential here. Here's the way I see it:
>
> From my physics text:
>
> Energy on a capacitor: C * V^2 / 2
>
> Work to charge a capacitor from 0 to V: Q * V/2, where Q is the total charge
> transferred, and V is the average voltage. Since Q = CV, the work is C * V^2
> / 2 (the same as the energy of a capacitor charged to voltage V). In more
> general terms, the work required to change the charge on a capacitor from Q1

> to Q2 is the integral of (q / C) dq over the range (Q1, Q2), which results
> in (Q2^2 - Q1^2) / 2C.
>
> Here's our problem:
>
> Initial energy in C1: C1 * V2^2 / 2
>
> Work done to decrease voltage on C1 from V2 to V1: C1 * (V1^2 - V2^2) / 2
>
> Work done to increase voltage on C2 from 0 to V1: C2 * V1^2 / 2
>
> Final energy in C1: C1 * V1^2 / 2
>
> Final energy in C2: C2 * V1^2 / 2
>
> Total initial energy: C1 * V2^2 / 2
>
> Total final energy: (C1 + C2) * V1^2 / 2
>
> [Initial energy] + [Work] = [Final energy]
>
> [C1 * V2^2 / 2] + [C1 * (V1^2 - V2^2) / 2 + C2 * V1^2 / 2] = [(C1 + C2) *
> V1^2 / 2]
>
> Charge is conserved, and the sum of energy and work is conserved.
>
> -- M --

2742. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: Dirk Bruere <artemis@kbnet.co.uk>
Message-ID: <bRkF4.1645$hc7.46321@news2-win.server.ntlworld.com>
Source record: 61886
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Bilge <root@radioactivex.lebesque-al.net> wrote in message
news:slrn8ea7u9.lk2.root@radioactivex.lebesque-al.net...
> >It seems easier to *explain* in words how a ferrite rod antenna or the
> >'passive amplifier' work by considering 'field concentration' (the

> Easier doesn't make it a correct representation of the underlying
> process - only a limiting case of it, recast to facilitate calculation.

There is no 'correct representation' apart from the mathematics.
Maybe you're one of these people who likes to talk about what 'really'
happens in QM?

Dirk

2743. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38e5ead4.1486106@news.mindspring.com>
Source record: 61887

Allan,

Thanks for the reply. I wasn't too worried about the finals a
ten watts! The TR-7 will just fold back the power and press on. I'm
just curious about the phenomenon. I tend to agree with the othe
poster about the pickup in the SWR meter.

Thanks

Russ - KF4WXD, since 1998 and still learning

Allan Henry Kaplan <w1aeljunkfilter@mindspring.com> wrote:

>At the ten-watt level with the mighty TR7 (I love mine!), there is
>absolutely NO need for concern with a measly 3:1 SWR! I sure do not
>know what could be causing it except for a squirrel in the attic
>swinging on your antenna, and I can understand your curiosity, but put
>all worry out of your mind. That level of SWR with the short feedline
>you must have for an attic antenna will make not a particle of
>difference to either the rig or the signal you emit. Be happy, don't
>worry, enjoy your hobby!!
>73,
>Allan, W1AEL since 1954.
>

Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2744. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38e5eb94.1677678@news.mindspring.com>
Source record: 61888

Bob,

I tend to disbelieve the SWR meter too, I'm just interested in
what is going on here. Do you thing that 10 watts would give it all
that much heat? Next week I'll try it at 20 or 25 watts and watch to
see when it occurs.

Thanks and 73

Russ - KF4WXD

"Bob" <balbert@cnmnetwork.com> wrote:

>Sounds like a problem with the SWR indicator. Perhaps it's getting warm and
>losing isolation. Open the unit and see what's going on there.
>
>I have three SWR indicators in line at all times and they don't quite agree.
>The one that is the poorest is in the MFJ 986 tuner. It utilizes a cross
>needle meter that is poorly calibrated. Further, the rf sampling toroid has
>poor insulation and gives erratic readings some of the time.
>
>Try another SWR indicator and make a comparison. I don't imagine anything
>in the antenna system itself is changing.
>
>73, Bob K6DDX
>
>

Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2745. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <HdGERqApLf54EwBP@jmwa.demon.co.uk>
Source record: 61889
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<38E59631.4B4AD8C7@entheosengineering.com>, Rich Grise <off-duty@entheosengineering.com> inimitably wrote:
>Hey, kids, I used to think I knew something about electronics,
>but this thread is confusing the hell out of me. Wouldn't a
>1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
>have 0 coulombs of charge, and when you connect them together,
>doesn't one coulomb go into the other cap, such that they're
>both at 1v now? (of course, this is in a perfect lossless
>circuit.) I'm thinking of two coffee cans with spigots and
>a hose; doesn't it work that way?

You have used Q = CV (conservation of charge Q) to get your result. Now look instead at E = CV^2/2 (conservation of energy E). The 1 F cap at 2 V has 2 joules of energy. When we finish up, IF we do, with two 1 F caps charged to 1 V, the total energy is only 2 x 1/2 = 1 J (joule).

Where did the missing 1 J go? That's the paradox.
>
>Apparently I haven't got enough complex math or calculus
>to understand what's *actually* going on.

Well for the *practical* case, you don't need any complex math. There MUST be some resistance, and the missing joule goes to heat it up. For the *ideal* case of superconducting wires and lossless capacitor dielectrics, the energy oscillates continuously between the capacitors and the stray inductance of the circuit, and to prove that you do really need to understand differential equations. The voltages across the capacitors DON'T end up at 1 V each, they change continuously, and the Q = CV equation isn't applicable in that simple form. In addition, some energy *may* be radiated away from the oscillating circuit, so that eventually the oscillation dies out and the capacitor voltages then do become equal - at zero!

While we do know that resistance of wires can be eliminated by using superconductors, we do not know that lossless dielectrics (e.g. a 'perfect vacuum') can exist and we do not know how to eliminate all inductance from any circuit, however small.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839 Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-automated nuclear-powered trawler,but it went into spontaneous fishing. PLEASE do not mail copies of newsgroup posts to me.

2746. Wanted: Yaesu FT7.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <8c4sf7$sq4$2@newsg1.svr.pol.co.uk>
Source record: 61890

I'm looking for a Yaesu FT7 rig.
Please reply direct to the address below.

Many thanks.
John.

john@mm1dsp.freeserve.co.uk

2747. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ec3uk.mkk.root@radioactivex.lebesque-al.net>
Source record: 61891
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

John Woodgate said some stuff about
>The two explanations ('energy-sucking' and 'impedance matching') are
>really equivalent. You may *prefer* one or the other, but that **does
>not** make one of them wrong.
>
It's wrong when it refers to "reaching out to pull in energy" rather
than using what was already there. The two are in no way equivalent.
Impedance matching provides optimization. The "energy sucking" claims
optimize + more. No way.

>I am surprised not to get any reaction to the 'passive amplifier'. Maybe

I'm not going to even start when the name itself is an oxymoron.

2748. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ec4h8.mkk.root@radioactivex.lebesque-al.net>
Source record: 61892
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Dirk Bruere said some stuff about
>
>There is no 'correct representation' apart from the mathematics.

There are certainly incorrect ones. I'm just pointing one out.
Physics is about determining what math describes nature.

>Maybe you're one of these people who likes to talk about what 'really'
>happens in QM?
>

Only to the point quantum mechanics allows it. Troll someone else.

2749. I will unbuild your Heathkits and EBay 'em

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38E63AFC.A07B0431@home.com>
Source record: 61893

Really, if Schlumberger or Daystrom realized what this stuff was going
for they would resuscitate the company. An antenna switch for $200????

2750. Re: Wanted: Yaesu FT7.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-01 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38e5ff61.317964997@news.online.no>
Source record: 61894

On Sat, 1 Apr 2000 14:04:48 +0100, "John"
<john@mm1dsp.freeserve.co.uk> wrote:

>I'm looking for a Yaesu FT7 rig.
>Please reply direct to the address below.
>
>Many thanks.
>John.
>
>john@mm1dsp.freeserve.co.uk
>
>
>
>
from wjhich countries do you intend to buy it?

2751. Ham Internet Telephony?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38e69756.17269848@news.erols.com>
Source record: 61806

A few years ago I was fooling around with the telephony program I-phone. There was a lot of ham activity using this software. (the only other users seemed to be porno fans!) When I logged on a few weeks ago, all the hams seemed to have disappeared.

Where have all the ham internet telephony fans gone? Are people using different software? Is there still a lot of audio only activity, or is everyone using video? How about Repeater-link stuff?

Please point me in the right direction!

73 Bill N2CQR
http://www.erols.com/wmeara

2752. Ham radio Links site

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: F6KEH <f6keh@qsl.net>
Message-ID: <8c64d5$j4o$6@wanadoo.fr>
Source record: 61807

```
Ham radio site :
F6KEH RESOURCES RELAY has been updated !

Visit it at : http://f6keh.free.fr/index_r
```

2753. Re: FAST PCB prototypes for $26

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: will <willyacht@yahoo.com>
Message-ID: <_4yF4.60844$3b6.237618@ozemail.com.au>
Source record: 61808

what i really need is someone that produces PCB artwork and boards from schematics, the learning curve on most PCB design software is steep, and hardly worth the time for one off boards. I use Electronics Workbench, how nice it would be just to email the schematic away and get a decent board back.

Will
<tusunov@my-deja.com> wrote in message news:8c5lt2$8b8$1@nnrp1.deja.com...
> check http://run.to/pcb
>
> no setup fees!
> free panelization!
> free cut to border!
>
> FR-4 - 1.6mm, 160x100mm (6,3x3,9") for only 26,00 USD
> Double side, PTH, Solder mask, Component mark
> Shipment in 3-5 working days !
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2754. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <uNYO1JATqv54Ewll@jmwa.demon.co.uk>
Source record: 61809
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<38E68397.63307537@entheosengineering.com>, Rich Grise <off-
duty@entheosengineering.com> inimitably wrote:
>Hmm - is this something like, for the circuit to be critically
>damped, the resistance has to dissipate the other Joule?

Whether critically damped or not, the resistance eventually dissipates
it.
> Or
>if it's the theoretical superconducting circuit with perfect
>dielectrics, it's radiated as EM energy?

Well, I don't think it's inevitable, but it may be. In any case, the
long-term solution involves the continual exchange of the initial energy
between the capacitance and inductance, and there is no way in which
energy can be lost, other than radiation. So there is no paradox.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

2755. Re: Wanted: Yaesu FT7.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <8c73g7clh1@news8.svr.pol.co.uk>
Source record: 61810

Sorry, but for some reason my usual signature didn't go out with the message.

Many thanks.

John (MM1DSP) Scotland.
G-QRP # 10123.

john@mm1dsp.freeserve.co.uk

2756. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E71A4A.3D346F32@eznec.com>
Source record: 61811
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

If you connect any finite value of resistance between the capacitors, the "lost" energy is easily accounted for as being dissipated by the resistor. If you put the impossible value of zero ohms between the capacitors, an equally impossible infinite current flows. So you're left with the conclusion that the time integral of the product of the zero resistance and the square of the infinite current equal the lost energy. In circuit analysis, these infinite currents are called "impulses", and academicians love to play with them. As a working engineer, I've never found much of a use for them.

Ironically, the first time I ran across this problem was on my PE exam.

Roy Lewallen, W7EL

Rich Grise wrote:
>
> Yeah, that darn 2nd-order term screws everything up! All the electrons
> are still there, and Q=CE still holds, (where Q == charge, C ==
> capacitance,
> and E == voltage), but the energy is different because somehow 1 Joule
> of
> work got done, is that it?
>
> I accidentally started a flame war once, which some of you might
> remember,
> about using a 115V bulb on a 230V line by just half-wave rectifying it.
> Got egg on my face when I did it on a spreadsheet and found out that
> the power would be 1.4 times the power of running the 115V bulb on 115V.
>
> Maybe I should stick with digital electronics and programming. :-)
>
> Cheers!
> Rich
>
> James Meyer wrote:
> >
> > On Sat, 01 Apr 2000 00:24:49 -0600, Rich Grise <off-duty@entheosengineering.com>
> > wrote:
> >
> > >Hey, kids, I used to think I knew something about electronics,
> > >but this thread is confusing the hell out of me. Wouldn't a
> > >1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
> > >have 0 coulombs of charge, and when you connect them together,
> > >doesn't one coulomb go into the other cap, such that they're

> > >both at 1v now? (of course, this is in a perfect lossless
> > >circuit.) I'm thinking of two coffee cans with spigots and
> > >a hose; doesn't it work that way?
> > >
> > >Apparently I haven't got enough complex math or calculus
> > >to understand what's *actually* going on.
> >
> > That's an excellent analogy. Two coffee cans with a pipe connecting
> > them at the bottom and a valve in the middle of the pipe. One can has two
> > pounds of water in it and the other one is empty. Open the valve and soon each
> > can has one gallon of water in it. The quantity of water is conserved just like
> > the quantity of charge in the caps.
> >
> > Now consider what amount of work you could get out of the can with two
> > pounds in it, if you let the water out from the bottom to drive a water wheel,
> > as compared to the amount of work you could get out of both cans when they each
> > have one pound.
> >
> > Since the pressure at the bottom of the can with two pounds in it is
> > higher than the pressure would be if it had only one pound, you get a lot more
> > work from the one pound of water that comes out first than from the one pound
> > that comes out last.
> >
> > The amount of energy stored in the two pound can is greater than the
> > amount of energy stored in two, one pound cans. Where did the extra energy go?
> > The amount of water didn't change.
> >
> > Jim

--
If your address book lists my address as w7el@teleport.com,
please change it to w7el@eznec.com. My web site URL, formerly
www.teleport.com/~w7el, is now http://www.eznec.com.

2757. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: W2EB <n2tpaNOn2SPAM@juno.com.invalid>
Message-ID: <16cd8d16.6bcc0200@usw-ex0105-034.remarq.com>
Source record: 61812

Ken,

Now the tough part. What constitutes a separate building,
and what constitutes a "small outbuilding"? I read the NEC.
Clear as mud describes it very well.
I was considering this a "small outbuilding" based on a
couple of things:

a. It's fed with 120V, not 220/240.

b. It isn't separately metered.

c. It's fed from a fuse in my house fusebox. NOT from the main
entering the house.

Right? Wrong?

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2758. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <38e76bba.75227696@news.erols.com>
Source record: 61813

Russ: I had similar problem with my HB QRP transmitter. SWR looked
good at the start, but when things got warmed up the SWR would
suddenly jump much higher.

In my case the problem turned out to be an intermittently bad final
amplifier transistor. As the thing heated up a bit, it started to
generate VHF parasitics. My antenna had a low SWR at 20 meters, but
not at VHF, so when the VHF energy got into the system, the SWR went
high.

There is an easy way to check for this: Run the rig into a resistive
dummy load and watch the SWR. Becasue the load is now resistive, the
VHF parasitics will have no effect on SWR (the load is the same at all
frequencies). Maybe run the rig until the problem starts, then switch
to the dummy load and check SWR.

Good luck. 73 Bill N2CQR
http://www.erols.com/wmeara

On Sat, 01 Apr 2000 02:44:09 GMT, rc9nix9on@mindspring.com (Russell C.
Nixon) wrote:

>Ok, I know that this is a homebrew group, but most here seem pretty
>constructive and I need some Elmering. I'll give some details and
>then pose a question. Thanks in advance.
>
>Drake TR-7, less than 1 year out of rehab at Drake.
>MFJ-941E Versa-tuner II with SWR meter.
>10-15-40m dipole in attic.
>CW on 21.140 mHz at ~10 watts output.
>
>The question: After ragchewing at 5-8 WPM on CW for an hour, the SWR
>as measured by the tuner showe a huge rise, up to around 3:1. The
>other station noticed no change in strength or character of the
>signal. Could it be a fault in the meter, or what? Oh, yeah, the
>tuner doesn't require too much in the way of capacity or inductance to
>tune the antenna. The MFJ-207 SWR "detector" was used to set the
>tuner and shows less than 1.2:1. Anybody got any ideas?
>
>Russ Nixon
>Russ Nixon - KF4WXD
>"If I can see further it is because I stand on the shoulders of giants."
>Issac Newton

2759. Re: High Voltage Feedthrough Caps forsale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Allan Henry Kaplan <w1aeljunkfilter@mindspring.com>
Message-ID: <38E747BF.671A83B0@mindspring.com>
Source record: 61814

Thanks for the tip, Roy. 73, Allan.

2760. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Allan Henry Kaplan <w1ael@mindjunkfilterspring.com>
Message-ID: <38E74A4A.550C7A86@mindjunkfilterspring.com>
Source record: 61815

A very plausible experiment! It does seem weird that 10 watts would
trigger this funny behavior, but you test sure makes sense.
37 Allan.

2761. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8c7li1$d65$1@uranium.btinternet.com>
Source record: 61816
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Every real electical circuit possesses capacitance, inductance,
conductor resistance and radiation resistance.

If one capacitor is discharged into another then the end result is
perfectly predictable according to universal laws which have been
known precisely for more than 120 years. Faraday, Kelvin, Maxwell and
Heaviside. All English except for Kelvin who was a Scot.
--
Regards, Reg.

2762. looking for ft50 soft

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: yo2llq <doiNOdoSPAM@internetcafe.ro.invalid>
Message-ID: <0b63106f.f6c34943@usw-ex0109-069.remarq.com>
Source record: 61817

hi there,
I've never posted a message before but there's always a
first time. so the story...I purchased a second hand FT50r
and found out that it can be programmed via computer. so I
started searching for the necessary stuff. so far I have
the schematic of the interface and its connections to radio
and computer. I need further the software(heard of
something called ADMS or similar). so if you could help me
in this way I would be most grateful. please reply to
doi@internetcafe.ro
vy tnx de yo2llq

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

2763. Software from ARRL Antenna Comp. 3

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Kimberly Weiss <kaweiss@indiana.edu>
Message-ID: <arueesk4jrp5uk5c954tru1eh3qvoj508q@4ax.com>
Source record: 61818

I need the software program HARTRPDI.BAS from the Antenna
Compendium Vol. 3, p. 61. Does anyone have it?

TIA,

Pete.
KF4VCC

2764. Re: Ham Internet Telephony?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8c7vocimu1@nnrp1.deja.com>
Source record: 61819

In article <38e69756.17269848@news.erols.com>,
n2cqr@erols.com (Bill Meara) wrote:
> A few years ago I was fooling around with the telephony program
> I-phone. There was a lot of ham activity using this software. (the
> only other users seemed to be porno fans!) When I logged on a few
> weeks ago, all the hams seemed to have disappeared.
>
> Where have all the ham internet telephony fans gone? Are people using
> different software? Is there still a lot of audio only activity, or
> is everyone using video? How about Repeater-link stuff?
>
> Please point me in the right direction!
>
> 73 Bill N2CQR
> http://www.erols.com/wmeara
>

Dear Bill,

The IPHONE chat rooms HAM RADIO and rptrlink are working fine, many hams
on there.
By the way, do you know other ham rooms?
--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2765. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ef0q6.rvv.root@radioactivex.lebesque-al.net>
Source record: 61820
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen said some stuff about
Re: "energy-sucking antennas": not who I seem? to usenet:
>If you connect any finite value of resistance between the capacitors,
>the "lost" energy is easily accounted for as being dissipated by the
>resistor. If you put the impossible value of zero ohms between the

That may be, but none of that is needed to solve this problem.
The "lost" energy is just due to the same charge being spread
over a larger volume.

2766. computer interferece

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: "peter p. scott" <deerslug@zoomnet.net>
Message-ID: <38E775A1.1891@zoomnet.net>
Source record: 61821

I have a little problem of my computer causing little birdies abt every 26 khz in my old tentec triton 540. if anyone has a possible cure i would like to hear comments.

2767. Re: 2N3053 Replacement with better power dissipation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8c81lvkls1@nnrp1.deja.com>
Source record: 61822
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <kt2E4.3999$D7.98582@news.itd.umich.edu>,
"Curtis Scholl" <cscholl@izzy.net> wrote:
> Hi Groups:
>
> I own a Ramsey QRP 30 meter CW rig and it's complement QRP AMP linear.
I
> like the setup and
> have made some nice CW contacts. With the rig alone I can get .4 W
out. I
> decreased the value of the collector resistor in the driver circuit
hoping
> to get a little more out of the transmitter. It worked and I got .5
Watts.
> But the 3053 final can't seem to keep up with the change.
> Would anyone suggest multiple 2N3053's or another device capable of
handling
> the power without producing so much heat?
> I would like to find a replacement for the 2N3053 that would not heat
up
> so much that the power drops. Is there a replacement that would handle
more
> dissipation without so much heat? I did some looking and found a
device with
> similar characteristics as the 3053 but with a higher power ratings.
The
> 2N3553 looks somewhat similar. Anyone out there know of a replacement
part
> with similar voltage/current/gain and hybrid parameters?
> I forgot to mention the power output of the transmitter when attached
to
> the QRP amp goes to 2 watts out the antenna! If I drive the QRP AMP to
> higher than this my AMP oscillates and goes into runaway. Talk about
HOT
> transistors. But that is another subject..
>
> Thanks and 73
>
> Curtis Scholl
> KG8SU
>
>

Well, you asked: "Would anyone suggest multiple 2N3053's or another device capable of handling the power without producing so much heat?"

This means that you want a device with higher efficiency (more power transferred to the antenna and less heat) but this is difficult to achieve because you are maintaining the operation class that defines the efficiency (then more output power leads to more heat).
The transistor that can withstand higher power is just a bigger one. It is a real luck to get such a transistor with similar parameters (if you use the same external components it may work but likely with smaller performance than the maximum). The heat generated will be the same but that big transistor can work with higher temperatures.
So, I'd suggest you to maintain the same transistor and improve its cooling system, that is, increase the heatsink to eliminate the heat on the transistor itself, resulting in lower temperature.
About the final amplifier you have to see whether it is not being overexcited. In this case, it is probable that you cannot take much more power from it. But if it is only a matter of overheat too, use the same cooling improvement.

--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2768. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <sk5evNBU5254EwWP@jmwa.demon.co.uk>
Source record: 61823
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<38E71A4A.3D346F32@eznec.com>, Roy Lewallen <w7el@eznec.com> inimitably
wrote:
>If you connect any finite value of resistance between the capacitors,
>the "lost" energy is easily accounted for as being dissipated by the
>resistor. If you put the impossible value of zero ohms between the
>capacitors, an equally impossible infinite current flows. So you're left
>with the conclusion that the time integral of the product of the zero
>resistance and the square of the infinite current equal the lost energy.
>In circuit analysis, these infinite currents are called "impulses", and
>academicians love to play with them. As a working engineer, I've never
>found much of a use for them.

I have to tell you that when this thread started about 100 years ago, I
was flamed rotten for mentioning the infinite current bit. (8-(
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

2769. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <uEWeXSBq8254Ew1v@jmwa.demon.co.uk>
Source record: 61824
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<8c7li1$d65$1@uranium.btinternet.com>, Reg Edwards
<G4fgq.Regp@btinternet.com> inimitably wrote:
>Every real electical circuit possesses capacitance, inductance,
>conductor resistance and radiation resistance.
>
>If one capacitor is discharged into another then the end result is
>perfectly predictable according to universal laws which have been
>known precisely for more than 120 years. Faraday, Kelvin, Maxwell and
>Heaviside. All English except for Kelvin who was a Scot.

Yes, we, or some of us, know that. But specific problems can still
exercise the intellect to find an explanation, particularly one that
will convince this lot^H^H^H^H^H^H^H^H the esteemed contributors to this
NG.

--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

2770. Re: computer interferece

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8c84bhngm1@nnrp1.deja.com>
Source record: 61825

In article <38E775A1.1891@zoomnet.net>,
deerslug@zoomnet.net wrote:
> I have a little problem of my computer causing little birdies abt
every
> 26 khz in my old tentec triton 540. if anyone has a possible cure i
> would like to hear comments.
>
I had a similar problem here. Normally interferences of this frequencies
are produced by the horizontal deflection of the monitor (or TV sets).
Firstly, vary the monitor brightness to see whether the birds intensity
varies. If positive, it means that the interference is generated by the
accelerated electron beam (within the tube) because accelerated charges
produce electromagnetic radiation and the beam is accelerated from right
to left and vice-versa during the horizontal sweep. If generated by the
horizontal circuits, the birdies are not brightness dependent.
The solution for my case, that lowered the birdies to very low levels,
was to open the monitor, glue tin paper to the monitor case inner wall,
BUT RESTORING THE OPENINGS ON IT (for heat dissipation) and grounding
the metal paper shield (as the shield must be grounded, the use of
aluminum paper is not recommended).
--
Greetings,
Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2771. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <38E781EA.1FC@pacbell.net>
Source record: 61826
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Reg Edwards wrote:
>
> Every real electical circuit possesses capacitance, inductance,
> conductor resistance and radiation resistance.
>
> If one capacitor is discharged into another then the end result is
> perfectly predictable according to universal laws which have been
> known precisely for more than 120 years. Faraday, Kelvin, Maxwell and
> Heaviside. All English except for Kelvin who was a Scot.
> --
> Regards, Reg.

Hi Reg,
I thought it was Maxwell who was the Scot.

Tom Donaly KA6RUH

2772. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ef7f3.rvv.root@radioactivex.lebesque-al.net>
Source record: 61827
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate said some stuff about
>
>Yes, we, or some of us, know that. But specific problems can still
>exercise the intellect to find an explanation, particularly one that
>will convince this lot^H^H^H^H^H^H^H^H the esteemed contributors to this
>NG.
>

You could always try checking the result without even using
a circuit:

Allow the first capacitor to drop to 0 volts by taking one
plate to infinity. (This is how it's defined in the first
place). What's the change in energy? Now, bring half the
charge back until you have the original capacitance. Since q=CV,
and C is the same, the voltage is 1 V. What was the change in
energy? Bring the other half of the charge in on the plate to
form the other capacitor so that the voltage is also 1 Volt
(miraculously, this occurs when both capacitances are the same).
What's the change in energy? Add this to the previous answer
and subtract it from the first answer. What's the non-zero
difference? Now connect a wire. Since both are at the same
potential, I don't have to obfuscate the answer with infinities.
If you object to the proceedure, then you can't use 1/2(CV^2)
anyway, since that result is predicated on bringing charge from
infinity. So, solve the problem AFTER defining your own
reference for 0 potential and AFTER redefining the expression
for the potential energy accordingly.

2773. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <SpcB80BAJ754EwAs@jmwa.demon.co.uk>
Source record: 61828
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<slrn8ef7f3.rvv.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>
> Allow the first capacitor to drop to 0 volts by taking one
> plate to infinity.

If you charge a cap and then take one plate to 'infinity', the voltage
becomes infinite. Q = CV: if C drops to zero and Q is conserved....
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

2774. Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Lee Smith <ckvnfm@mb.sympatico.ca>
Message-ID: <Y8SF4.1370$TC1.32505@news1.mts.net>
Source record: 61829

Hello Folks!

I have a Pyramid model PS-12 power supply which provides 12 amps at 13.5 volts which has no output. This was left to me by my dad when he passed away a couple of years ago.

When I do the tracing with a voltmeter, I find it seems to be working up to the unidentified IC in the circuit used for voltage regulation.

While I do have a schematic, and all other component values and part numbers are listed, there is no info for the IC other than "IC 1." When I look at the IC, it has had the numbers ground off and I have no way of determining the correct replacement for it.

I have scanned the schematic, and can email it to anyone who can assist me with determining a functional replacement.

A search on the web has been fruitless in finding the company address to attempt a followup through them. This is a good little supply that can work perfectly for my 2 meter mobile while in the house if I can get it running again.

Thanks in advance for the help!

73 de
Lee Smith
VE4ANC
http://www.ckvn.com

2775. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <38E7F0FD.1287A8E2@carroll.com>
Source record: 61830

If it is a 14 pin DIP, chances are that it is a uA723 voltage regulator. This device has been around for years, and is still used in some new designs. Costs a buck or 2 from any of the standard parts suppliers.

Bob Weiss N2IXK

Lee Smith wrote:

> Hello Folks!
>
> I have a Pyramid model PS-12 power supply which provides 12 amps at 13.5
> volts which has no output. This was left to me by my dad when he passed
> away a couple of years ago.
>
> When I do the tracing with a voltmeter, I find it seems to be working up to
> the unidentified IC in the circuit used for voltage regulation.
>
> While I do have a schematic, and all other component values and part numbers
> are listed, there is no info for the IC other than "IC 1." When I look at
> the IC, it has had the numbers ground off and I have no way of determining
> the correct replacement for it.
>
> I have scanned the schematic, and can email it to anyone who can assist me
> with determining a functional replacement.
>
> A search on the web has been fruitless in finding the company address to
> attempt a followup through them. This is a good little supply that can work
> perfectly for my 2 meter mobile while in the house if I can get it running
> again.
>
> Thanks in advance for the help!
>
> 73 de
> Lee Smith
> VE4ANC
> http://www.ckvn.com

2776. Re: Cushman CE-50 Repair Info Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Keith McQueen <n7hmf@ucares.org>
Message-ID: <38e7f221_2@news.sisna.com>
Source record: 61831

Cushman support is available from:

NS Electronics
3610 Dekalb Technology Parkway, Suite 110
Atlanta, GA 30340

(770) 451-3264
(770) 458-8785 fax

Donald Smith <desmith@innercite.com> wrote in message
news:38E2EC1F.B70E8500@innercite.com...
> I have just picked up a Cushman CE-50 that seems to have a bit of a
> problem. I cannot seem to receive a signal thru it even though the
> squelch seems to work. I also seem to be able to generate a signal OK
> and the modulation circuits seem fine. I have the manual but it doesn't
> seem to be very complete with the serviceing information. Can anybody
> help or point me in the right direction. Thanks Don KB6GQA Please
> respond via email.
>

2777. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: schumach@convex.hp.com
Message-ID: <8c8t2p$i74@valencia.rsn.hp.com>
Source record: 61832
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

The analogy holds. Assuming lossless caps/cans and wires/pipes,
the charge/water would slosh back forth between the two indefinitely.
The "lost" energy is in the current of charge/water. Of course,
real systems have loss, so that energy quickly becomes heat
and is dissipated.

>>Hey, kids, I used to think I knew something about electronics,
>>but this thread is confusing the hell out of me. Wouldn't a
>>1F cap at 2v have 2 coulombs of charge, and a 1F cap at 0v
>>have 0 coulombs of charge, and when you connect them together,
>>doesn't one coulomb go into the other cap, such that they're
>>both at 1v now? (of course, this is in a perfect lossless
>>circuit.) I'm thinking of two coffee cans with spigots and
>>a hose; doesn't it work that way?
>>
>>Apparently I haven't got enough complex math or calculus
>>to understand what's *actually* going on.

> That's an excellent analogy. Two coffee cans with a pipe connecting
>them at the bottom and a valve in the middle of the pipe. One can has two
>pounds of water in it and the other one is empty. Open the valve and soon each
>can has one gallon of water in it. The quantity of water is conserved just like
>the quantity of charge in the caps.

> Now consider what amount of work you could get out of the can with two
>pounds in it, if you let the water out from the bottom to drive a water wheel,
>as compared to the amount of work you could get out of both cans when they each
>have one pound.

> Since the pressure at the bottom of the can with two pounds in it is
>higher than the pressure would be if it had only one pound, you get a lot more
>work from the one pound of water that comes out first than from the one pound
>that comes out last.

> The amount of energy stored in the two pound can is greater than the
>amount of energy stored in two, one pound cans. Where did the extra energy go?
>The amount of water didn't change.

2778. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E7FFC6.9FE601BA@eznec.com>
Source record: 61833
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge wrote:
>
> Roy Lewallen said some stuff about
> Re: "energy-sucking antennas": not who I seem? to usenet:
> >If you connect any finite value of resistance between the capacitors,
> >the "lost" energy is easily accounted for as being dissipated by the
> >resistor. If you put the impossible value of zero ohms between the
>
> That may be, but none of that is needed to solve this problem.
> The "lost" energy is just due to the same charge being spread
> over a larger volume.

The final system has less energy than the initial system. So regardless of what caused the energy loss, it's still gone from the system, and is lost, not "lost". As you or someone else pointed out, work was done when the capacitors were connected together. This work was done on something besides the capacitors, and that something received the energy represented by that work. And if you want to get the capacitors back to their initial states, you'll have to put that much energy back into the system from somewhere else. With any finite resistance, the work is done on the resistor, which dissipates the received energy as heat. In the zero-resistance case, the result is probably an infinite amount of heat for zero time or some such concoction -- I'll leave that to the philosophers.

Roy Lewallen, W7EL

2779. Re: probes for used oscilloscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: niebur@russell.mb.jhu.edu
Message-ID: <m23dp4hqz5.fsf@russell.mb.jhu.edu>
Source record: 61834

david@slack.com (David DiGiacomo) writes:

<excellent advice snipped>

Thanks a lot for your tips and the URLs, all very helpful. It turns out that someone sent me some probes, even Fedexed them to me. I certainly want to give credit to him but I am not sure if he wants me to do it here publicly. I was certainly amazed by his generosity! And the probes work great!

Thanks a lot to all that applied and, of course, in particular to the person who sent me the probes.

73,

--Ernst KB3CEE

2780. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E80193.42177A9A@eznec.com>
Source record: 61835

Bob Weiss wrote:
>
> If it is a 14 pin DIP, chances are that it is a uA723 voltage regulator. This
> device has been around for years, and is still used in some new designs. Costs a
> buck or 2 from any of the standard parts suppliers.
>
> Bob Weiss N2IXK

This popular regulator also came in a 10 pin TO-5 size metal can. I
believe the package was called a TO-100.

Roy Lewallen, W7EL

2781. Re: "energy sucking" simplified- Round 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38E7F5FC.6C5EB394@entheosengineering.com>
Source record: 61836
Cross-posted to: sci.physics.electromag,rec.radio.amateur.homebrew,sci.electronics.design

A. Scott Chesnick wrote:
>
> Hello all,
> I found this in the Washington Post yesterday.

Do you mean yesterday, as in "April 1?"

>
> This seems to fit in well with the rants and raves of the recent thread
> and violating the regular laws of physics in the least time.
>
> Does anyone know anything else about this?
> Regarde' Scott
>
> A. S. Chesnick
> Engineer
> In Vivo Center for Nuclear Magnetic Resonance Imaging
> National Institutes of Health
> Bethesda, Md. 20892
>
> MINNEAPOLIS, March 21ï¿½Two California physicists
> announced today that they had created a new class of
> materials, never before seen in nature, with highly unusual
> properties that may have applications in fields such as wireless
> communication.
>
> The materials, described as "left-handed," reverse the normal
> way that microwave energy--including such standard natural
> phenomena as the Doppler Effect--behaves, the researchers
> said.
<snip>

2782. REQ: Schematic for Hamtronics R139 receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-02 00:00:00 UTC
From: Craig C N5XNQ <cpclark@pca.net>
Message-ID: <290B0DAF9CC60671.43CEB9F1B15912E5.B5C3E160E87E04BF@lp.airnews.net>
Source record: 61837

Does anyone have a schematic for a Hamtronics R139? If so please email me at cpclark@pca.net Thank you in advance.

Craig Clark - N5XNQ
http://w3.pca.net/~cpclark

2783. Wanted-Yeasu FT7 rig.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <8c9pth$hb4$1@news5.svr.pol.co.uk>
Source record: 61695

I'm looking for a Yaesu FT7 rig.
Please send price and rig details
direct to the address below.

Many thanks.
John MM1DSP (Scotland)
G QRP # 10123

john@mm1dsp.freeserve.co.uk

2784. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8c8qa9$a34$1@plutonium.btinternet.com>
Source record: 61696
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Tom said -
> I thought it was Maxwell who was the Scot.
==========
Tom, I made a mess of waving the Union Jack.

Yes, Clerk Maxwell was born in 1831 at 14, India Street, Edinburgh.
Died relatively young in 1879.

I assumed Thompson, Lord Kelvin, was a Scot because Kelvin, a name
chosen by himself, is also the name of a tributary which runs into the
river Clyde at Kelvinside, Glasgow where the great man spent some of
his childhood. But in fact he was born in Belfast, Ireland. Kelvin:
1824 - 1901.

Thanks for the correction.

Reg.

2785. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38E85BE9.1DCC62B6@entheosengineering.com>
Source record: 61697
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen wrote:
>
> Where I come from, the energy stored in the field in the capacitor is
> 1/2 * C * V^2. Using this simple calculation, the sum of the energy in
> the two capacitors is less than it was when we started. But you're
> saying it's still there someplace, so there's energy in a field
> somewhere other than the capacitors. Where is this field?
>
> If all the initial energy is still in the system, as you say, you should
> be able to use it to get the capacitors back to their initial states of
> charge without application of an external source of energy. Please
> relate how you'd do this.
>
> Roy Lewallen, W7EL
>

This is starting to sound like "Maxwell's Demon" - level stuff.

Yeah, so does anybody know where the energy goes?

Thanks!
Rich

2786. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E8817F.4934430C@eznec.com>
Source record: 61698
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Rich Grise wrote:
>
> Roy Lewallen wrote:
> >
> > Where I come from, the energy stored in the field in the capacitor is
> > 1/2 * C * V^2. Using this simple calculation, the sum of the energy in
> > the two capacitors is less than it was when we started. But you're
> > saying it's still there someplace, so there's energy in a field
> > somewhere other than the capacitors. Where is this field?
> >
> > If all the initial energy is still in the system, as you say, you should
> > be able to use it to get the capacitors back to their initial states of
> > charge without application of an external source of energy. Please
> > relate how you'd do this.
> >
> > Roy Lewallen, W7EL
> >
>
> This is starting to sound like "Maxwell's Demon" - level stuff.
>
> Yeah, so does anybody know where the energy goes?
>
> Thanks!
> Rich

Yep. The integral of I^2 * R dt, where I is the current flowing between the capacitors and R is the resistance. If R is zero, then I is infinite, t is zero, and the integral of the product is still finite and equals the missing energy. Look in the index of any circuit analysis text under "impulse". It's easier for me to just put an arbitrarily small resistance between the capacitors and see what happens in the limit as the resistance is further reduced.

Roy Lewallen, W7EL

2787. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <20fYLkAC5G64EwNz@jmwa.demon.co.uk>
Source record: 61699
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

<slrn8egrgm.saa.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:

>Why dont you try what I suggested the first
> time before continuing to ask the same question. Start with two equal
> capacitors and bring in charge q. Then just use 1 capacitor and
> repeat with 2q. Now, post the result and explain exactly why the
> energy is different.

No, if you think that is a valid explanation, it is up to *you* to post
the details for others to check.

It's an easy cop-out to say: 'This is my explanation. Now you do the
work of posting the details!'.

I can't help feeling that you would be very quick to express the same
view in another case. Don't you want W. Beatty to post all his
calculations (if any) related to tuned antennas?
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

2788. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8ca65ndgc1@ausnews.austin.ibm.com>
Source record: 61700

In <oAhF4.50651$17.1103151@news4.giganews.com>, "Bob" <balbert@cnmnetwork.com> writes:
>Sounds like a problem with the SWR indicator. Perhaps it's getting warm and
>losing isolation. Open the unit and see what's going on there.
>
>I have three SWR indicators in line at all times and they don't quite agree.
>The one that is the poorest is in the MFJ 986 tuner. It utilizes a cross
>needle meter that is poorly calibrated. Further, the rf sampling toroid has
>poor insulation and gives erratic readings some of the time.
>
>Try another SWR indicator and make a comparison. I don't imagine anything
>in the antenna system itself is changing.
>
>73, Bob K6DDX
>

It very well could be the antenna system changing. Back when I was first licensed, I built a (5-band/80-40-20-15-10 meter) trap dipole. Being a student at the time, my financial resources were very limited. Thus, instead of the transmitting style (doorknob) capacitors called for in the plans for the trap, I used ordinary ceramic capacitors (The doorknob capacitors were going for about $25 each, compared to the $.05 for the ceramic ones.). Unfortunately, the ceramic capacitors weren't able to handle the RF energy in the traps, and the SWR would go from 1:1 to about 5:1 in about 30 seconds. Of course, when the transmitter was off, the capacitors would cool down and the SWR would revert to 1:1.

If the antenna in use is a trap style antenna, then I'd check the traps to see if the capacitors could be heating up and changing value (and, it doesn't take too much of a change to detune the traps). 10 watts isn't a lot of power, but if any portion of it at all is being dissipated in the capacitors, it can cause a rather large temperature rise, which can affect the tuning of the traps adversely.

Anyway, it's just another thing to check.

Dave

P.S. Very soon after finding this, I sprung for the doorknob transmitting style capacitors and replaced the capacitors in the trap, which fixed the problem.

P.P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2789. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ehbdi.saa.root@radioactivex.lebesque-al.net>
Source record: 61701
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate said some stuff about

>No, if you think that is a valid explanation, it is up to *you* to post
>the details for others to check.
>
The details were already posted. If you cant bring yourself to
back up in the thread, I consider putting up the solution just
for you.

>It's an easy cop-out to say: 'This is my explanation. Now you do the
>work of posting the details!'.
>
That would explain why you mention all those nebulous resistances and
inductances without actually showing anything, huh? If you bothered
to read the posts before responding, you might avoid the non-sequiters.

>I can't help feeling that you would be very quick to express the same

I'm sure you cant, but haven't been able to figure out where you
come up with this. Try going backwards (through the thread).

>view in another case. Don't you want W. Beatty to post all his
>calculations (if any) related to tuned antennas?

I think the "if any" about sums up the amount of attention paid to
any of the comments about the antenna. Considering all of the details
(as in the arithmetic, not handwaving) I've already posted showing
exactly what charges flow at what times in the cycle and the uselessness
of the outer plates, yes. I not only expect details, I expect whatever
he considers to be invalid regarding the various expressions I posted
for charges, time constants, voltages and E-fields to be pointed out
along with a reason. Apparently, you not only cant put numbers in this
problem, but you dont even read the posts you criticize.

2790. ** FLEA at MIT ** Sunday April 16th Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: w1gsl@mit.edu
Message-ID: <38e8ad1b$0$21254@senator-bedfellow.mit.edu>
Source record: 61702
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Subject: ** FLEA at MIT ** Sunday April 16th Cambridge MA
Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

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Enclose SASE for return by mail.

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

2791. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ehdjh.saa.root@radioactivex.lebesque-al.net>
Source record: 61703
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen said some stuff about

>Yep. The integral of I^2 * R dt, where I is the current flowing between
>the capacitors and R is the resistance. If R is zero, then I is
>infinite, t is zero, and the integral of the product is still finite and

I can prove anything I want by tossing in an ifinity and a zero and
blowing off taking proper limits. If I just use tweezers and pick up
the charges and move them the result is the same.

This really doesn't support the claims that physics doesnt provide
physical explanations but instead relies on math (unless you're in
physics, in which case, change "physics" to "most people in physics").
The intuitive, physical description needs none of this, and has the
additional virtue of being correct. The question is more like,
why do people think the first recourse to a physics problem is
all the math they can find?

>equals the missing energy. Look in the index of any circuit analysis
>text under "impulse". It's easier for me to just put an arbitrarily

Now... Expand the step funcnction in terms of the most ugly
hypergeometric functions you can locate in morse and feshbach,
take Laplace transforms term by term, perhaps going slightly
off the real axis and you'll have made this about as difficult
as possible without any particular reason. Why stop halfway?

>small resistance between the capacitors and see what happens in the
>limit as the resistance is further reduced.

Gee. For an arbitrarily small resistance... an arbitrarily small
amount of energy is lost. Skip the resistor and do it charge by
charge. same answer. Guess what. If I take the charge and move
every electrin through a different path through any points in
the universe, I still get the same answer. Where'd all THAT
energy go? If moving charges required circcuit analysis and
resistors, the E-field wouldn't be conservative.

2792. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: schumach@convex.hp.com
Message-ID: <8cajni$lbk@valencia.rsn.hp.com>
Source record: 61704
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

>The analogy holds. Assuming lossless caps/cans and wires/pipes,
>the charge/water would slosh back forth between the two indefinitely.
>The "lost" energy is in the current of charge/water. Of course,
>real systems have loss, so that energy quickly becomes heat
>and is dissipated.

And, for the electrical case, EM radiation. Sound could be the
analogy to EM radiation in the water case.

2793. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38E8D0B5.4AFF3340@mmm.com>
Source record: 61705
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen wrote:

> > > And if you want to get the capacitors back to
> > >their initial states, you'll have to put that much energy back into the
> > >system from somewhere else.

Let me take a whack at it.

If, as has been suggested, you move the electrons one at
a time by tweezers, and gently pluck them off one plate
and gently place them on the other, then the field does work
on your tweezers as you move the electrons from the charged
plate to the other plate. If you have a sufficiently
clever arraignment of weights and pulleys, you could use
that work to lift some weights. You would have then
stored the energy in a form that you could use to put the
charges back.

Or you could just turn them loose and let them go ballistic,
in which case, just before they hit the destination plate,
they would have kinetic energy equal to the "missing"
potential
energy. They would smack down on the plate and produce heat
and/or light.

Or you could let them trickle through an ordinary positive
valued resister and they would convert the kinetic energy to
heat
and/or light in a sequence of collisions with the resister.

Opinions expressed herein are my own and may not represent those of my employer.

2794. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38E8D3DB.709698AC@mmm.com>
Source record: 61706
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen wrote:

> Yep. The integral of I^2 * R dt, where I is the current flowing between
> the capacitors and R is the resistance. If R is zero, then I is
> infinite, t is zero, and the integral of the product is still finite and
> equals the missing energy.

Just picking a mathematical nit:

Although, it is a satisfactory answer for the practical
problem when R is known to be positive and small, if you
let R be negative as you approach zero, you get an
entirely different result. Since the value of the
limit (or even its existence) depends on how R approaches
zero, then we are not allowed to say anything about the
value of this calculation for R = 0. Ultimately,
all we can say is that for R > 0, the result holds.

Sorry, but as a plausibility argument it is fine.

Opinions expressed herein are my own and may not represent those of my employer.

2795. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000403135752.02611.00002095@ng-cg1.aol.com>
Source record: 61707

Hello, Lee, on my Pyramid, I replaced mine with an LM-723 regulator, from radio shack.

I bought the matching socket for it...this is very important because you can solder in the socket to the board, and then when the socket is cool, just press in the IC...no heat damage...

Regards,
Joe Pratt, Tubecntral@aol.com

2796. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: "Dana H. Myers K6JQ" <dana@source.net>
Message-ID: <38E8ECB0.68ABB866@source.net>
Source record: 61708

TUBE CENTRAL wrote:
>
> Hello, Lee, on my Pyramid, I replaced mine with an LM-723 regulator, from radio
> shack.
>
> I bought the matching socket for it...this is very important because you can
> solder in the socket to the board, and then when the socket is cool, just press
> in the IC...no heat damage...

Be careful when socketing ICs, particularly linear parts that may dissipate
some heat. Temperature-cycling can weaken the socket contacts until they no
longer make good contact, which causes increased heat in the contact and
results in possibly intermittent failure.

I generally would not socket such a part; they're really not that critical
in terms of heat damage, you're much more likely to damage the PCB if you're
careful.

When I do socket such parts, I'll use the machined-pin Augat type sockets which
seem to have a decent track record with respect to thermal-cycling.

--
Dana K6JQ DoD #j
Dana@Source.Net

2797. Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000403150907.02620.00002095@ng-cg1.aol.com>
Source record: 61709

I am trying to build a solid state replacement for a 120VAC/12DCpower supply.Circuit will be an NE555 osc driving a flipflop driving a pair of power fets.I am trying to figure what frequency I should run the osc. My guess is that the origional vibrator operated at 60hz since it uses the same transformeras the AC portion of the power supply, this is what I need to verify.

2798. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E8EDE0.133ADD48@eznec.com>
Source record: 61710
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

I'm satisfied with this. I lack the curiosity (or time) to try and conclusively determine where the energy goes in an impossible and contrived circumstance. I'm satisfied to know where it goes in any situation that can possibly be constructed. So if the energy does something impossible in an impossible circuit, well, that's ok by me.

In college, I knew a fellow whose masters thesis in mathematics was a 55 page proof that A minus A equals B minus B for any A and any B. He told me that it was relatively simple to prove that A minus A equals zero and B minus B equals zero. The hard part, he said, was proving that the two zeros were equal. This discussion is, to me, similar. I'm really a poor mathematician and even a poorer philosopher, so at this point I'll bow out and leave the discussion to people more interested in these disciplines than I.

Roy Lewallen, W7EL

Roy McCammon wrote:
>
> Roy Lewallen wrote:
>
> > Yep. The integral of I^2 * R dt, where I is the current flowing between
> > the capacitors and R is the resistance. If R is zero, then I is
> > infinite, t is zero, and the integral of the product is still finite and
> > equals the missing energy.
>
> Just picking a mathematical nit:
>
> Although, it is a satisfactory answer for the practical
> problem when R is known to be positive and small, if you
> let R be negative as you approach zero, you get an
> entirely different result. Since the value of the
> limit (or even its existence) depends on how R approaches
> zero, then we are not allowed to say anything about the
> value of this calculation for R = 0. Ultimately,
> all we can say is that for R > 0, the result holds.
>
> Sorry, but as a plausibility argument it is fine.
>
> Opinions expressed herein are my own and may not represent those of my employer.

2799. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E8EE32.AAC69CC4@eznec.com>
Source record: 61711
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

No, sorry, I won't play. I have to get back to what I really should be doing. Carry on.

Roy Lewallen, W7EL

Bilge wrote:
>
> Roy Lewallen said some stuff about
> Re: "energy-sucking antennas": not who I seem? to usenet:
> >Where I come from, the energy stored in the field in the capacitor is
> >1/2 * C * V^2. Using this simple calculation, the sum of the energy in
> >the two capacitors is less than it was when we started. But you're
> >saying it's still there someplace, so there's energy in a field
> >somewhere other than the capacitors. Where is this field?
> >
> >If all the initial energy is still in the system, as you say, you should
> >be able to use it to get the capacitors back to their initial states of
> >charge without application of an external source of energy. Please
> >relate how you'd do this.
> >
>
> The same way you get the energy back after lowering a box. You do
> work to lift it. After the charges move to a lower potential, you
> do work to put them back. Where I come from there's a such thing
> as potential energy. Why dont you try what I suggested the first
> time before continuing to ask the same question. Start with two equal
> capacitors and bring in charge q. Then just use 1 capacitor and
> repeat with 2q. Now, post the result and explain exactly why the
> energy is different. I dont see how to simplify it further without
> just referring to an introductory physics text like halliday &
> resnick or sears, zemansky & young and reading through a better
> explanation than I'll probably provide. Is there some objection
> to breaking out a pen and paper and perhaps a book to check and
> see what what written about it before last week? It's one thing
> to not know the answer, but quite another to not check one
> before insisting too many times that a solution posted is wrong,
> when, if nothing else get's the right answer without customizing
> the problem with features to make your alternative work, if you
> dont ask too many questions about the less rigorous parts.
> I believe the person posting the correct answer did so on
> the third or fourth followup. Try checking it.

2800. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Robert <romapa@earthlink.net>
Message-ID: <38E90321.AE7E7943@earthlink.net>
Source record: 61712
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen wrote:

> In college, I knew a fellow whose masters thesis in mathematics was a 55
> page proof that A minus A equals B minus B for any A and any B. He told
> me that it was relatively simple to prove that A minus A equals zero and
> B minus B equals zero. The hard part, he said, was proving that the two
> zeros were equal.

This is trivial since by definition 0 is the identity under addition which means 0+a=a+0=a for every single a. Now if there is another identity say 0' then we have:

0+0'=0' with 0 taken as identity

and

0+0'=0 with 0' taken as identity

which means

0=0+0'=0' and the two are really one and the same.

What is this guy doing these days?- in sales.

2801. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38E933C3.CBD5EC4F@home.com>
Source record: 61713

You might find it easier/less real estate to use an LM3524 or LM3525 Both NatSemi and Siemens have designs on their websites. Remember to use ferrite beads for RFI - the switching transients - aren't nice.

I don't know the correct answer, but might it not be easier still to forget about generating a symmetrical a.c. signal for the transformer, and instead run a pumped inductor switchmode supply, into the filter section of the original supply (after the rectifier.)?

Hamm4fun wrote:

> I am trying to build a solid state replacement for a 120VAC/12DCpower
> supply.Circuit will be an NE555 osc driving a flipflop driving a pair of power
> fets.I am trying to figure what frequency I should run the osc. My guess is
> that the origional vibrator operated at 60hz since it uses the same
> transformeras the AC portion of the power supply, this is what I need to
> verify.

2802. Re: Need HUMMM advice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Deacon Dave <w1mce@arrl.net>
Message-ID: <38E90E12.EA4BC9B@arrl.net>
Source record: 61714
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

You answered his question as asked. But, can you offer some advice??

Floyd Sense wrote:

> Yes.
>
> K8AC
>
> Ron H <rnharsh@visi.com> wrote in message
> news:kKFt4.1664$%A3.36470@ptah.visi.com...
> > OBSERVATION
> > I am hearing a HUMmmm in my headphones when the rig is first keyed and on
> > each key closure for three or four characters. I also noticed that the
> power
> > output starts off a little higher and drops a few watts as the hum goes
> > away.
> >
> > QUESTION
> > Could this be a function of the capacitive power supply filter on the
> final
> > plate supply? No choke, just caps.....
> >
> > Should I be concerned???
> > 73 K3PID
> >
> >
> >

2803. Wanted 6063 T8 drawn Aluminum Tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Nyles & Karen Priest <npriest@tcccom.net>
Message-ID: <38e979ae.0@windy.powercom.net>
Source record: 61715

Does anyone have a good source for 1.25" aluminum tubing? I need a
replacement piece 7' 6" long and the shipping is more than the tubing value.
A Wisc., Illinois, Mich, oe Minn source would be best.
73's Nyles W9KUW

2804. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E921DF.E12ADA40@eznec.com>
Source record: 61716
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Robert wrote:
>
> Roy Lewallen wrote:
>
> >
> > In college, I knew a fellow whose masters thesis in mathematics was a 55
> > page proof that A minus A equals B minus B for any A and any B. He told
> > me that it was relatively simple to prove that A minus A equals zero and
> > B minus B equals zero. The hard part, he said, was proving that the two
> > zeros were equal.
> >
> >
>
> This is trivial since by definition 0 is the identity under addition which means
> 0+a=a+0=a for every single a. Now if there is another identity say 0' then we have:
>
> 0+0'=0' with 0 taken as identity
>
> and
>
> 0+0'=0 with 0' taken as identity
>
> which means
>
> 0=0+0'=0' and the two are really one and the same.
>
> What is this guy doing these days?- in sales.

Your asking that question aroused my curiosity, so I did a quick web search for his name. I hadn't seen or heard from him since I left Illinois Institute of Technology in 1964. At that time he was working toward his Ph.D. Apparently he's no longer with us, but a scholarship has been established in his name. The brief bio is reproduced below.

Since your proof is so much more elegant than his was, they're sure to name a scholarship after you, too.

Roy Lewallen, W7EL

THE JAMES W. PETTICREW MATHEMATICS SCHOLARSHIP

The James W. Petticrew Scholarship was established in March of 1994 by a group of relatives and friends of Dr. Petticrew, who was born in Springfield,
Ohio on December 26, 1940 and obtained his Ph.D. in 1969 at the Illinois

Institute of Technology. He worked in public schools and colleges in Indiana
and Illinois before coming to the University of Texas-Pan American in 1985.

Dr. Petticrewï¿½s main interest in mathematics was geometry, and during six years at the University of Texas-Pan American he produced several papers
and made numerous presentations in collaboration with other faculty in the Department. Another strong interest of his was computer literacy, which he
taught on a regular basis.

Dr. Petticrewï¿½s passion was to collect books, most of them in the area of mathematics. One of the most remarkable characteristics of his personality is
how quickly and deeply he fell in love with the Rio Grande Valley and its people, even though he had lived most of his life in Indiana and Illinois. When
writing his will, Dr. Petticrew's main concerns were to make sure that all his books were donated to the University of Texas-Pan American and that an
endowed scholarship was established with some of his estate. His relatives and friends made sure that this was done for the benefit of UT-PA
mathematics students.

-- from http://www.math.panam.edu/dept/scholarships/pettisch.html

2805. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: rc9nix9on@mindspring.com
Message-ID: <38e92373.2624015@news.mindspring.com>
Source record: 61717

Dave,

The antenna ia a simple dipole with a close-to-resonant 10M
segment and a not-too-resonant 40M section on a common center. The
40M has capacity hats for 15M. The capacity hats are figure "8"s of
wire, out at the 15M 1/4 wave position. The feedline is RG-8 with a
10' section of RG-8U in a 10" multi-turn loop as a balun. There just
isn't all that much there between the transceiver and the ionosphere.
I suspect the SWR meter and will do a comparison test.

glass2@glass2.lexington.ibm.com wrote:

>In <oAhF4.50651$17.1103151@news4.giganews.com>, "Bob" <balbert@cnmnetwork.com> writes:
>>Sounds like a problem with the SWR indicator. Perhaps it's getting warm and
>>losing isolation. Open the unit and see what's going on there.
>>
>>I have three SWR indicators in line at all times and they don't quite agree.
>>The one that is the poorest is in the MFJ 986 tuner. It utilizes a cross
>>needle meter that is poorly calibrated. Further, the rf sampling toroid has
>>poor insulation and gives erratic readings some of the time.
>>
>>Try another SWR indicator and make a comparison. I don't imagine anything
>>in the antenna system itself is changing.
>>
>>73, Bob K6DDX
>>
>
>It very well could be the antenna system changing. Back when I was first
>licensed, I built a (5-band/80-40-20-15-10 meter) trap dipole.
>Being a student at the time, my financial
>resources were very limited. Thus, instead of the transmitting style (doorknob)
>capacitors called for in the plans for the trap,
>I used ordinary ceramic capacitors (The
>doorknob capacitors were going for about $25 each, compared to the $.05 for
>the ceramic ones.). Unfortunately, the ceramic capacitors weren't able to
>handle the RF energy in the traps, and the SWR would go from 1:1 to about
>5:1 in about 30 seconds. Of course, when the transmitter was off, the
>capacitors would cool down and the SWR would revert to 1:1.
>
>If the antenna in use is a trap style antenna, then I'd check the traps to
>see if the capacitors could be heating up and changing value (and, it doesn't
>take too much of a change to detune the traps). 10 watts isn't a lot of power,
>but if any portion of it at all is being dissipated in the capacitors, it can
>cause a rather large temperature rise, which can affect the tuning of the
>traps adversely.

>
>Anyway, it's just another thing to check.
>
>Dave
>
>P.S. Very soon after finding this, I sprung for the doorknob transmitting
>style capacitors and replaced the capacitors in the trap, which fixed the
>problem.
>
>P.P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>

Russ Nixon - KF4WXD
"If I can see further it is because I stand on the shoulders of giants."
Issac Newton

2806. BUILD YOUR OWN C`A.B,L,E B,O`X...FREE C`A.B,L.E`.. 6599

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: ovmbqb@dfdsdfg.com
Message-ID: <zy9G4.33776$QJ3.3873207@dfiatx1-snr1.gtei.net>
Source record: 61718
Cross-posted to: uk.local.channel-isles,rec.radio.amateur.homebrew

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mpfuhpgrwossrqgcciscvuzibqrbusjpxowizodsnzwqtsuxykceyewzyzifkzngljdlhzvocckq

2807. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Robert <romapa@earthlink.net>
Message-ID: <38E92A9B.464BADCD@earthlink.net>
Source record: 61719
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

The point of my post was that the topic of your friend's thesis could not possibly have been as you describe it. Why don't you just accuse me of being responsible for his death?

Roy Lewallen wrote:

> Robert wrote:
> >
> > Roy Lewallen wrote:
> >
> > >
> > > In college, I knew a fellow whose masters thesis in mathematics was a 55
> > > page proof that A minus A equals B minus B for any A and any B. He told
> > > me that it was relatively simple to prove that A minus A equals zero and
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> > >
> > >
> >
> > This is trivial since by definition 0 is the identity under addition which means
> > 0+a=a+0=a for every single a. Now if there is another identity say 0' then we have:
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> > 0+0'=0' with 0 taken as identity
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> > and
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> > 0+0'=0 with 0' taken as identity
> >
> > which means
> >
> > 0=0+0'=0' and the two are really one and the same.
> >
> > What is this guy doing these days?- in sales.
>
> Your asking that question aroused my curiosity, so I did a quick web
> search for his name. I hadn't seen or heard from him since I left
> Illinois Institute of Technology in 1964. At that time he was working
> toward his Ph.D. Apparently he's no longer with us, but a scholarship
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>
> Roy Lewallen, W7EL
>

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> The James W. Petticrew Scholarship was established in March of 1994 by a
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> Ohio on December 26, 1940 and obtained his Ph.D. in 1969 at the Illinois
> Institute of Technology. He worked in public schools and colleges in
> Indiana
> and Illinois before coming to the University of Texas-Pan American in
> 1985.
>
> Dr. Petticrewï¿½s main interest in mathematics was geometry, and during
> six years at the University of Texas-Pan American he produced several
> papers
> and made numerous presentations in collaboration with other faculty in
> the Department. Another strong interest of his was computer literacy,
> which he
> taught on a regular basis.
>
> Dr. Petticrewï¿½s passion was to collect books, most of them in the area
> of mathematics. One of the most remarkable characteristics of his
> personality is
> how quickly and deeply he fell in love with the Rio Grande Valley and
> its people, even though he had lived most of his life in Indiana and
> Illinois. When
> writing his will, Dr. Petticrew's main concerns were to make sure that
> all his books were donated to the University of Texas-Pan American and
> that an
> endowed scholarship was established with some of his estate. His
> relatives and friends made sure that this was done for the benefit of
> UT-PA
> mathematics students.
>
> -- from http://www.math.panam.edu/dept/scholarships/pettisch.html

2808. how transform a PAGER into a receiver vhf??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: gervais <gfillio1@globetrotter.qc.ca>
Message-ID: <uDaG4.3894$NS6.113637@news.globetrotter.net>
Source record: 61720

Hi all,
is there a possibility to transform,retune a pager from NEC no r3v2-2b .it
would be use as a receiver for my need on the land here .i would transmit in
vhf and it would receive the signal

it is a voice pager.

thanks for your help

gervais
ve2ckn@rac.ca

2809. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E93F67.3CEBC391@eznec.com>
Source record: 61721
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Robert wrote:
>
> The point of my post was that the topic of your friend's thesis could not possibly have
> been as you describe it. Why don't you just accuse me of being responsible for his death?

You asked what he was doing these days, and I answered as well as I could.

I didn't read or even see his thesis. What I posted was the way he described it to me. So either 1. He lied to me; 2. I lied to you; 3. I misunderstood what he told me; or 4. Perhaps you don't know quite as much about the subtleties of one particular area of math as he did. Take your choice. I don't pretend to even begin to understand the subtleties of number theory, but I have every reason to believe he was telling me the truth, and his explanation didn't leave much room for misunderstanding, so I'll remain convinced that he did what he said. You'll remain convinced that he didn't, and that's fine. Like you, I don't have any problem dealing with subtraction and zero, but I also know that within the careful structures of number theory, the conventional definitions we accept and use don't necessarily apply. But in no way am I capable of providing any proof or elaboration beyond what I posted.

I was simply trying to make a point, not start a pissing contest.

Now, I'd like to disengage from this tar baby. Carry on.

Roy Lewallen, W7EL

2810. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Chuck Parsons <Chuck@CatenaryScientific.com>
Message-ID: <38E94538.80B62B9B@CatenaryScientific.com>
Source record: 61722
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy McCammon wrote:

> Roy Lewallen wrote:
>
> > Yep. The integral of I^2 * R dt, where I is the current flowing between
> > the capacitors and R is the resistance. If R is zero, then I is
> > infinite, t is zero, and the integral of the product is still finite and
> > equals the missing energy.
>
> Just picking a mathematical nit:
>
> Although, it is a satisfactory answer for the practical
> problem when R is known to be positive and small, if you
> let R be negative as you approach zero, you get an
> entirely different result. Since the value of the
> limit (or even its existence) depends on how R approaches
> zero, then we are not allowed to say anything about the
> value of this calculation for R = 0. Ultimately,
> all we can say is that for R > 0, the result holds.
>
> Sorry, but as a plausibility argument it is fine.

Hmm,

So when we take a limit as N->infinity we must also come from
the other side? So we don't know that the taylor series expansion
of sine or cosine actually converges?

There are good reasons to exclude phenomena that add energy
to the system. Doesn't a negative resistance imply this?

It is not clear to me for example what potential a electron has
at distance 0. And I certainly have no idea what the potential
is at negative distances. But I don't feel bad about approaching
the result by doing calculations for small positive distances.

Chuck

2811. FA: Digital Display, see it on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <gHcG4.83$U3.6829@newsfeed.avtel.net>
Source record: 61723
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.swap

see it at: http://www.electronbay.com/lot.cfm?lotID=128

2812. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy McCammon <rbmccammon@ieee.org>
Message-ID: <38E95D10.AD03F96B@ieee.org>
Source record: 61724
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Chuck Parsons wrote:

> So when we take a limit as N->infinity we must also come from
> the other side? So we don't know that the taylor series expansion
> of sine or cosine actually converges?

That's why we avoid infinity.

Actually sine(x) has no limit as x approaches infinity.

The point is a mathematical one, that if t= function
is continuous, then the the limit is the same
regardless of which way you approach. The particular
function at hand did not have this property at zero,
so you really don't get to say anything about what happens
at zero, based only on the one sided limit.

But you know what I mean.

2813. Re: twisted pair cable - how to simulate?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8c8pmq$e99$1@nnrp1.deja.com>
Source record: 61838

In article <789F4.8490$Fk.135455@news2.mia>,
"Bert Douglas" <bertdNOSPAM@bellsouth.net> wrote:
> Hi All,
>
> How do I simulate cat 5 cable for the unbalanced transmission of NTSC
video?
>
> Thanks,
> Bert Douglas
>
> Why simulate? just buy some cat 5 and try it.

dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

2814. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8efsjs.saa.root@radioactivex.lebesque-al.net>
Source record: 61839
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

John Woodgate said some stuff about
Re: "energy-sucking antennas": not who I seem? to usenet:
><slrn8ef7f3.rvv.root@radioactivex.lebesque-al.net>, Bilge
><root@radioactivex.lebesque-al.net> inimitably wrote:
>>
>> Allow the first capacitor to drop to 0 volts by taking one
>> plate to infinity.
>
>If you charge a cap and then take one plate to 'infinity', the voltage
>becomes infinite. Q = CV: if C drops to zero and Q is conserved....

The potential at infinity by definition is taken to be 0. Q is
conserved. You do not need to move the plate anywhere, I just
figured it would be easier for you to deal with than moving
charges from infinity. Which is how the potential at a finite
distance is defined. I'll resort to the pedantically correct
argument so that I dont casually ignore the fact that the potential
energy is due to the conductor holding the charges which are
moved from infinity to the conductor. I have a conductor at
0 potential (with the refernce point 0 at oo). I can move 1
electron at a time to the plate. Without a wire. What is the
work done?

You can still bring in the plate from infinity. It takes the same
work to assemble the charges regardless of where you do it. Moving
the first charge to its final location is always a freebie. Once
the charges have been assempled on the conductor, relocating
the conductor doesnt cost anything. It moves as a single charge.

2815. IC746 AM Audio Mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: w1xyz@aol.com
Message-ID: <20000402214436.16010.00000722@ng-bk1.aol.com>
Source record: 61840

Anyone brave enough to have tried to get into the modulator of one of these rigs to clean up the AM TX?

You can get about 60% on mine without too much distortion, but after that it gets pretty harsh sounding and various forms of distortion are visible on the scope.

Outboard audio with and EQ helps, but it is limited.

Bob

W1XYZ

2816. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8eg6lb.saa.root@radioactivex.lebesque-al.net>
Source record: 61841
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen said some stuff about
>
>The final system has less energy than the initial system. So regardless
>of what caused the energy loss, it's still gone from the system, and is
>lost, not "lost". As you or someone else pointed out, work was done when
>the capacitors were connected together. This work was done on something
>besides the capacitors,

The work wasn't done on the capacitors. It's done on the charges.

> and that something received the energy
>represented by that work.

It goes into the potential energy stored in the field.
With one charge at infinity and another at the origin,
there is, by definition, no energy stored in the field
(but feel free to pick any value, since it drops out
of any calculation). Moving the charge to some distance
r fron the charge at the origin requires work to be done
against the electromagnetic force (just like changing
the height of an object in a gravitational field). The
work done is the potential energy stored in the field.

> And if you want to get the capacitors back to
>their initial states, you'll have to put that much energy back into the
>system from somewhere else.

Yep.

> With any finite resistance, the work is done
>on the resistor, which dissipates the received energy as heat. In the

Nope. The the final configuration can be acheived by moving the
charges along any path to yield the same answer. Your choice for
a resistor as a means to dissipate the energy cant support that.
You get the same answer whether the wire is 1 cm long or arbitrarily
long. A resistor isn't conservative. This is. The work done is
manifest in the change in energy stored in the field. If all of
the charges are further apart, the forces on them are lower.
It takes less energy to hold them in place. (work isnt always
negative or a loss -- when you lower box from a shelf to the floor,
you do work in lowering the boxes potential energy).

>zero-resistance case, the result is probably an infinite amount of heat
>for zero time or some such concoction -- I'll leave that to the
>philosophers.

>

No concoction required. It's a matter of W = -\Delta U.

2817. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Lee Smith <ckvnfm@mb.sympatico.ca>
Message-ID: <9QVF4.1469$TC1.33928@news1.mts.net>
Source record: 61842

Hello All:

Thanks very much for the tip! I'll look into it right away.

73 de
Lee Smith
VE4ANC

2818. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38E84CC0.FAE0E531@eznec.com>
Source record: 61843
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Where I come from, the energy stored in the field in the capacitor is 1/2 * C * V^2. Using this simple calculation, the sum of the energy in the two capacitors is less than it was when we started. But you're saying it's still there someplace, so there's energy in a field somewhere other than the capacitors. Where is this field?

If all the initial energy is still in the system, as you say, you should be able to use it to get the capacitors back to their initial states of charge without application of an external source of energy. Please relate how you'd do this.

Roy Lewallen, W7EL

Bilge wrote:
>
> Roy Lewallen said some stuff about
> >
> >The final system has less energy than the initial system. So regardless
> >of what caused the energy loss, it's still gone from the system, and is
> >lost, not "lost". As you or someone else pointed out, work was done when
> >the capacitors were connected together. This work was done on something
> >besides the capacitors,
>
> The work wasn't done on the capacitors. It's done on the charges.
>
>
> > and that something received the energy
> >represented by that work.
>
> It goes into the potential energy stored in the field.
> With one charge at infinity and another at the origin,
> there is, by definition, no energy stored in the field
> (but feel free to pick any value, since it drops out
> of any calculation). Moving the charge to some distance
> r fron the charge at the origin requires work to be done
> against the electromagnetic force (just like changing
> the height of an object in a gravitational field). The
> work done is the potential energy stored in the field.
>
> > And if you want to get the capacitors back to
> >their initial states, you'll have to put that much energy back into the
> >system from somewhere else.
>
> Yep.

>
> > With any finite resistance, the work is done
> >on the resistor, which dissipates the received energy as heat. In the
>
> Nope. The the final configuration can be acheived by moving the
> charges along any path to yield the same answer. Your choice for
> a resistor as a means to dissipate the energy cant support that.
> You get the same answer whether the wire is 1 cm long or arbitrarily
> long. A resistor isn't conservative. This is. The work done is
> manifest in the change in energy stored in the field. If all of
> the charges are further apart, the forces on them are lower.
> It takes less energy to hold them in place. (work isnt always
> negative or a loss -- when you lower box from a shelf to the floor,
> you do work in lowering the boxes potential energy).
>
>
> >zero-resistance case, the result is probably an infinite amount of heat
> >for zero time or some such concoction -- I'll leave that to the
> >philosophers.
> >
>
> No concoction required. It's a matter of W = -\Delta U.

2819. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-03 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8egrgm.saa.root@radioactivex.lebesque-al.net>
Source record: 61844
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen said some stuff about
Re: "energy-sucking antennas": not who I seem? to usenet:
>Where I come from, the energy stored in the field in the capacitor is
>1/2 * C * V^2. Using this simple calculation, the sum of the energy in
>the two capacitors is less than it was when we started. But you're
>saying it's still there someplace, so there's energy in a field
>somewhere other than the capacitors. Where is this field?
>
>If all the initial energy is still in the system, as you say, you should
>be able to use it to get the capacitors back to their initial states of
>charge without application of an external source of energy. Please
>relate how you'd do this.
>

The same way you get the energy back after lowering a box. You do
work to lift it. After the charges move to a lower potential, you
do work to put them back. Where I come from there's a such thing
as potential energy. Why dont you try what I suggested the first
time before continuing to ask the same question. Start with two equal
capacitors and bring in charge q. Then just use 1 capacitor and
repeat with 2q. Now, post the result and explain exactly why the
energy is different. I dont see how to simplify it further without
just referring to an introductory physics text like halliday &
resnick or sears, zemansky & young and reading through a better
explanation than I'll probably provide. Is there some objection
to breaking out a pen and paper and perhaps a book to check and
see what what written about it before last week? It's one thing
to not know the answer, but quite another to not check one
before insisting too many times that a solution posted is wrong,
when, if nothing else get's the right answer without customizing
the problem with features to make your alternative work, if you
dont ask too many questions about the less rigorous parts.
I believe the person posting the correct answer did so on
the third or fourth followup. Try checking it.

2820. Re: Licensing Questions

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: heildg <heildg@my-deja.com>
Message-ID: <t46kesodno47m9m2kh2kfc5pmmb1jfnlke@4ax.com>
Source record: 61645

Thanks.

On 30 Mar 2000 20:36:38 GMT, troglodite@aol.com (Troglodite) wrote:

>
>>What level of license do I need to build a ham band R/C radio? This
>>is all I ever envision using a amateur license for.
>
>A technician class licence will allow you to operate model radio control
>transmitters on 50Mhz and above. Most ham RC activity is on 50Mhz. You still
>need to observe the "gentlemen's agreement" on which segment of the band to use
>for RC. Check in your area for any beacons, repeaters or other local use before
>picking your final frequency.
>
>I've used 50Mhz, 144Mhz, and 220Mhz for RC models, but there is no commercial
>equipment (to my knowledge) for anything except 50Mhz. If you want to operate
>on the other bands, you'll have to roll your own.
>
>Doug Moore KB9TMY (Formerly K6HWY)
>

2821. WANTED: EQUIPMENT RACK IN FLORIDA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Dennis Griffin <w4dg@arrl.net>
Message-ID: <VbpG4.4870$PY.16579@typhoon.tampabay.rr.com>
Source record: 61646
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Looking for 19" steel equipment racks, height from 4' to 7', depth min. of 22" with rear door.

Prefer rack not beat up or full of holes.

Will pick up within the state of Florida or close by!

Please e-mail me with details or PIXs

TNX & 73.

--
WEBSITE: http://www.geocities.com/ResearchTriangle/Lab/4473/index.htm

2822. MC1466 needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: "James S. Speck" <speck@qns.com>
Message-ID: <zfpG4.2673$096.521902@news-west.usenetserver.com>
Source record: 61647

This is probably a hopeless case, but I need two (at least) MC1466 voltage regulators (discontinued Motorola) for a couple of Lambda power supplies. Does anyone have one (or more)?

Thanks
Jim W5AI

2823. Re: WANTED: EQUIPMENT RACK IN FLORIDA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Radiskull <Radiskull@usa.com>
Message-ID: <VspG4.3712$zF6.20759@typhoon.tampabay.rr.com>
Source record: 61648
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Go to SkyCraft Parts -- surplus electronics in Orlando (Winter Park)
On the corner of I-4 and Fairbanks.

Have your choice there (course it cost $$) but a very interesting surplus
electronics store.

cheers

Dennis Griffin <w4dg@arrl.net> wrote in message
news:VbpG4.4870$PY.16579@typhoon.tampabay.rr.com...
> Looking for 19" steel equipment racks, height from 4' to 7', depth min. of
> 22" with rear door.
>
> Prefer rack not beat up or full of holes.
>
> Will pick up within the state of Florida or close by!
>
> Please e-mail me with details or PIXs
>
> TNX & 73.
>
> --
> WEBSITE: http://www.geocities.com/ResearchTriangle/Lab/4473/index.htm
>
>

2824. Re: FAST PCB prototypes for $26

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: tusunov@my-deja.com
Message-ID: <8cdaqfdqg1@nnrp1.deja.com>
Source record: 61649

you have no problems - send your schematic for our quotation.
also look at our web page what additional info you have to provide to
receive corect quotation

Tsvetan

In article <_4yF4.60844$3b6.237618@ozemail.com.au>,
"will" <willyacht@yahoo.com> wrote:
> what i really need is someone that produces PCB artwork and boards
from
> schematics, the learning curve on most PCB design software is steep,
and
> hardly worth the time for one off boards. I use Electronics Workbench,
how
> nice it would be just to email the schematic away and get a decent
board
> back.
>
> Will
> <tusunov@my-deja.com> wrote in message
news:8c5lt2$8b8$1@nnrp1.deja.com...
> > check http://run.to/pcb
> >
> > no setup fees!
> > free panelization!
> > free cut to border!
> >
> > FR-4 - 1.6mm, 160x100mm (6,3x3,9") for only 26,00 USD
> > Double side, PTH, Solder mask, Component mark
> > Shipment in 3-5 working days !
> >
> >
> > Sent via Deja.com http://www.deja.com/
> > Before you buy.
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

2825. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000404142939.02630.00002423@ng-cg1.aol.com>
Source record: 61650

Hello, thanks for the added input in the matter. I used the type of socket
that was specified to work with the 723 chip... Do you think I should take the
socket out and resolder the chip to the board? So far I have had no problem
with it. Maybe I got lucky?
I was trying to be helpful, I hope I didn't cause a problem.

That's why I stick to tubes ! :o)
Kind regards, Joe Pratt

Re>
>>
>>TUBE CENTRAL wrote:
>>>
>>> Hello, Lee, on my Pyramid, I replaced mine with an LM-723 regulator, from
>>radio
>>> shack.
>>>
>>> I bought the matching socket for it...this is very important because you
>>can
>>> solder in the socket to the board, and then when the socket is cool, just
>>press
>>> in the IC...no heat damage...
>>
>>Be careful when socketing ICs, particularly linear parts that may dissipate
>>some heat. Temperature-cycling can weaken the socket contacts until they no
>>longer make good contact, which causes increased heat in the contact and
>>results in possibly intermittent failure.
>>
>>I generally would not socket such a part; they're really not that critical
>>in terms of heat damage, you're much more likely to damage the PCB if you're
>>careful.
>>
>>When I do socket such parts, I'll use the machined-pin Augat type sockets
>>which
>>seem to have a decent track record with respect to thermal-cycling.
>>
>>--
>>Dana K6JQ DoD #j
>>Dana@Source.Net
>>
>>
>>
>>
>>
>>
>>

>
>Dana is right on the money on this. Either use a good socket or solder it in
>directly.
>BTW: I replaced the IC in my Pyramid 30 amp supply with a 723.
>
>
>
>
>
>

Regards,
Joe Pratt, Tubecntral@aol.com

2826. Help..need all the help we can get

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Alfa Lima International <alinter@rendo.dekooi.nl>
Message-ID: <8cdg3ntbo1@fullnews.dekooi.nl>
Source record: 61651

Hi there again..
i have again something for yea..
and it is ,,,,,,,,,,,A Chat box.. i know that there are a few pirate and listeners chat boxes but.. this one can use anyone.. and i want ot make it pouplar..Thats why i am asking you this question.can you place a link to it....
the url is
http://www.rendo.dekooi.nl/~alinter/chat.htm
we will ask a lot of people to do the same.. hopefuly. we are sucsesfull...
greatings and all the best from a radio friend...Alfred..
bye and all the numbers for yea..
ps if you want a kind of chat button it is aviableblle on our web page with banners.
http://gemeente.nl.fortunecity.com/zeeland/127/banner.htm
SO.. Help US..ASK PEOPLE FOR PLACING A LINK

--
##
Alfa Lima International, Freeradio out of europe
with lots of cool information on our web page.
logs,online web receivers,usefull links, mail adresses of stations
real audio,,just to much!!!
****
http://www.rendo.dekooi.nl/~alinter
http://fly.to/freeradio

Alfa Lima International
pobox 663
7900ar Hoogeveen
the Netherlands
##

Also go to our web page and join our listboth mailing list

2827. Re: "HELP!" Tube info (4-400) (4-500)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000404144403.02630.00002427@ng-cg1.aol.com>
Source record: 61652

Hello, Lou, you asked:

>information about tubes. First of all, What is the difference (if any)
>between
>a 4-400 and a
>4-400A?

4-400 run like this:
4-400A is the equivalent of a 8438, which is a transmitting triode, Thoriated Tungsten (TT) filiment, 5.0 V @ 14.5 amps. Rated at 400 wats up to 110 Mhz.
T
here is no difference in Sibley's 'Tube Lore' for 4-400A and 4-400... BUT

The 4-400-C is an update of the 400-A, also known as a 6775, which is the same as a 8438, but the 'C' has smaller plate structure, lower operating temp. filiment, one-piece plate cap, and basically ruggedized for longer life.

Lou also asked:
Secondly, I need info on a 4-500, is it the same as a 4-400 but just
>newer and higher plate dissapation? Is the tube socket and filament
>requirements the same as a 4-400?

I see no listing for a 4-500, perhaps you had it confused with a 3-500Z, or the 4-400C like described above.

Best of luck, I hope this helps you a little bit.

The source for this info was 'Tube Lore', by Ludwell Sibley.

While I am on the subject, I have a good 4-400C, tests 85%, was to be used as a backup in a radio station transmitter, it's anybody's for 55.00 shipped in USA.
I believe it's an Eimac or Amperex.

Regards,
Joe Pratt, Tubecntral@aol.com

2828. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Dana@Source.Net
Message-ID: <8cdfrdjkv1@nnrp1.deja.com>
Source record: 61653

In article <20000404142939.02630.00002423@ng-cg1.aol.com>,
tubecntral@aol.com (TUBE CENTRAL) wrote:
> Hello, thanks for the added input in the matter. I used the type of
socket
> that was specified to work with the 723 chip... Do you think I should
take the
> socket out and resolder the chip to the board? So far I have had no
problem
> with it. Maybe I got lucky?

The problem is not that the socket does not match the chip; any
14-pin DIP will "work" in any 14-pin DIP socket. The issue is
of long-term reliability; the 723 chip can and probably does
dissipate some heat under normal operation (the amount of heat
given off will vary with respect to the load on the power
supply; even though the 723 drives external pass transistors,
increased load on the pass transistors results in increased
load on the 723).

When the 723 heats up and cools down, it may eventually weaken
the contacts on the socket, by taking out the springiness. When
that happens, the contact itself will heat up and soon after
become unreliable. Most of the inexpensive 14-pin sockets with
the thin tin-plated leads can't handle much heat; the more expensive
sockets with round brass pins have proven better in my experience.

So, to answer your question, I'd say do nothing for the moment,
and if the power supply becomes flakey down the road, one of the
first things you should look at is the socket.

--
Dana K6JQ
Dana@Source.Net

Sent via Deja.com http://www.deja.com/
Before you buy.

2829. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <38EA3F9D.60687D3B@clifto.com>
Source record: 61654
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Reg Edwards wrote:
> The capacitance of the Earth to the remainder of the universe is a
> meagre 707 microfarads.

Maybe, but where can you buy a 2,000,000,000,000,000,000,000,000 volt
capacitor?

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

2830. Re: DOH! My big "energy sucking" error!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8eklqj.81.root@radioactivex.lebesque-al.net>
Source record: 61655
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew,sci.physics

Clifton T. Sharp Jr. said some stuff about
Re: DOH! My big "energy sucking" error! to usenet:
>Reg Edwards wrote:
>> The capacitance of the Earth to the remainder of the universe is a
>> meagre 707 microfarads.
>
>Maybe, but where can you buy a 2,000,000,000,000,000,000,000,000 volt
>capacitor?
>

Gee. Not even ay 20%? Did someone slack off of the quality
of ceramic? ;>

2831. FS: EICO Scope Model 435

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <cLsG4.50708$n03.1424797@news20.bellglobal.com>
Source record: 61656

Small scope, very nice unit, Model 435, will cover up to 3.5 - 4 Mhz. I have all the manuals and two probes. This is a single channel scope. Its available for $ 35.00 plus shipping. John

2832. FS: Philips Audio Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <fNsG4.50729$n03.1425134@news20.bellglobal.com>
Source record: 61657

Compact, tube audio generator, great condition, working no manual. Its available for $ 35.00 plus shipping. John

2833. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Corky <corky@myremarq.com>
Message-ID: <0ff386d0.9cdef102@usw-ex0103-023.remarq.com>
Source record: 61658

Jesus man, why not just do it right?

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

2834. FS: Ceramic Coil Form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <b4tG4.50818$n03.1426045@news20.bellglobal.com>
Source record: 61659

Never used ceramic coil form, ID 2" Outer dia about 2.5" Length 5". It has the groves to hold up to 12 to 14 guage wire. Its available for $ 15.00 including shipping CONUS. John

2835. FS: 4 post screw strip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <a7tG4.50825$n03.1426398@news20.bellglobal.com>
Source record: 61660

Think of the 4 post screw strips behind a receiver, where you could hook up the speakes, antenna and gnd. I have about 100 or so. All have screws, inslation has 2 mounting holes. 10 pieces for $ 4.00 plus $ 1.33 for shipping CONUS. John

2836. FS: 11 screw terminal strip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <NatG4.50834$n03.1427142@news20.bellglobal.com>
Source record: 61661

This is a heavy duty terminal strip that has 11 screw places with screws. There is a barrier between each screw. It also comes with a plastic insulation base. No missing screws. 4 terminal strips for $ 4.00 plus $ 1.33 for shipping CONUS. John

2837. FS: Digital Bread board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <sdtG4.50842$n03.1427423@news20.bellglobal.com>
Source record: 61662

These are the units that you could plug in IC, wires, resistors, capacitors, anything where the leads are not too big. This is a 6 x 8" area bread board on a metal base. Its available for $ 35.00 plus $ 3.50 shipping. CONUS

2838. FS: MRF-454 RF Power transistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <ErtG4.50977$n03.1427392@news20.bellglobal.com>
Source record: 61663

2 never used, still sealed in plastic. Please email. John

2839. MRF449A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Tony Walsh <ei5em@gofree.indigo.ie>
Message-ID: <lPtG4.1781$sB3.1014@news.indigo.ie>
Source record: 61664

Anybody know where in Europe I can find a supplier for a MRF449A transistor?

Mni Tnx de Tony EI5EM

2840. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: KD7FLE@yahoo.com
Message-ID: <38ea70ee.28816533@news.teleport.com>
Source record: 61665

Like you say, clear as mud. *I* would not call it a seperate service,
neither would most *reasonable* inspectors. Unfortunatly, I know a lot
of unreasonable inspectors that would say if it's a seperate building,
it's a seperate service. The NEC gives all final authority to the
local inspector!

Not much helo, am I?

Ken

On Sun, 02 Apr 2000 04:14:06 -0700, W2EB
<n2tpaNOn2SPAM@juno.com.invalid> wrote:

>Ken,
>
> Now the tough part. What constitutes a separate building,
>and what constitutes a "small outbuilding"? I read the NEC.
>Clear as mud describes it very well.
> I was considering this a "small outbuilding" based on a
>couple of things:
>
>a. It's fed with 120V, not 220/240.
>
>b. It isn't separately metered.
>
>c. It's fed from a fuse in my house fusebox. NOT from the main
>entering the house.
>
>
>Right? Wrong?
>
>* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
>The fastest and easiest way to search and participate in Usenet - Free!
>

73, Ken KD7FLE
Milwaukie, OR SOC# 254

2841. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: tubecntral@aol.com
Message-ID: <20000404190109.02623.00002370@ng-cg1.aol.com>
Source record: 61666

Thanks very much! You learn something new everyday withn help from folks like yourself. So far so good, but will definiteloy keep it in mind on any future problem.

BTW, the transformer in this unit runs pretty hot to the touch...is this a normal occurance in the larger Pyramids? I got this on a trade for some old CB equipment... I will be buying an Astron in the future...
Best regards, Joe Pratt

Ref:
>
>In article <20000404142939.02630.00002423@ng-cg1.aol.com>,
>tubecntral@aol.com (TUBE CENTRAL) wrote:
>> Hello, thanks for the added input in the matter. I used the type of
>socket
>> that was specified to work with the 723 chip... Do you think I should
>take the
>> socket out and resolder the chip to the board? So far I have had no
>problem
>> with it. Maybe I got lucky?
>
>The problem is not that the socket does not match the chip; any
>14-pin DIP will "work" in any 14-pin DIP socket. The issue is
>of long-term reliability; the 723 chip can and probably does
>dissipate some heat under normal operation (the amount of heat
>given off will vary with respect to the load on the power
>supply; even though the 723 drives external pass transistors,
>increased load on the pass transistors results in increased
>load on the 723).
>
>When the 723 heats up and cools down, it may eventually weaken
>the contacts on the socket, by taking out the springiness. When
>that happens, the contact itself will heat up and soon after
>become unreliable. Most of the inexpensive 14-pin sockets with
>the thin tin-plated leads can't handle much heat; the more expensive
>sockets with round brass pins have proven better in my experience.
>
>So, to answer your question, I'd say do nothing for the moment,
>and if the power supply becomes flakey down the road, one of the
>first things you should look at is the socket.
>
>--
>Dana K6JQ
>Dana@Source.Net
>

>
>Sent via Deja.com http://www.deja.com/
>Before you buy.
>
>
>
>
>
>
>

Regards,
Joe Pratt, Tubecntral@aol.com

2842. Engine driven DC Power Supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: CessnaPilot <stinson108@my-deja.com>
Message-ID: <8cduh8$4i6$1@nnrp1.deja.com>
Source record: 61667

Okay, here's the deal: Shack has no AC source and is far from any so it runs off batteries and solar panel. I decided to try to activate an old tube rig that draws 22 amps which would deplete the batteries in short order. So... I went to the local flea market and came home with a 4 HP lawn mower engine and a Ford alternator. The alternator has a built-in regulator. The idea is to kick in the 35 DC amps when running the old tube rig. My first concern is being able to hear a weak DX over the noise of the engine. I can move it a couple hundred feet from the shack, but don't know if the voltage drop would be a problem. Have you or your friends ever tried or done this? Any suggestions or comments? It sounds like a good idea to me, but then so did some other things I've tried that I won't be doing again. All opinions respected. TNX, Stinson

Sent via Deja.com http://www.deja.com/
Before you buy.

2843. Tube Manufacturing Notes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: TDLW <thelma@hawk.igs.net>
Message-ID: <8cduqc$1nt$1@news.igs.net>
Source record: 61668

I would appreciate receiving suggestions on what should be done with my collection of manufacturing notes from a period in my dim and distant past making 7 & 9 pin receiving tubes for RCA. I also have some of my father's notes which go back to the earliest days, WD 11's etc. There is also a collection of approx 100+ tube manuals, equivalent lists etc including 7 Vade-Mecum, Barabini, UK CV listings, Jan Mil equivalents, a Sylvania Puurchasing Source Book...approx 500 pages of print-out, etc plus, totally unrelated...a 1921 Vol 1 Automobile Green Book, New England States.

Sam W

2844. Re: P channel FETs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: David Snowdon <norway@interlog.com>
Message-ID: <NjyG4.4850$xz1.164228@cac1.rdr.news.psi.ca>
Source record: 61669

B.G. Micro is selling them for a pretty cheap price. See www.bgmicro.com

David, VA3DKS
norway@interlog.com

"Michael Black" <blackm00@cam.org> wrote in message
news:blackm00-0404000135200001@dialup-358.hip.cam.org...
> In article <fcdG4.162$xv1.20243@typhoon2.gnilink.net>, "Ed W."
> <edek@mail.gcnet.net> wrote:
>
> > Is there such a thing as a small-signal, "P" channel, RF transistor? DC
> > Electronics only sell "N" channel varieties, for instance. A complement
to
> > the MPF-102 or similar type, is what I would be interested in. Would
there
> > possibly be such a thing as a "matched, complementary, N and P
> > pair"?.....Ed W., K3FDY.
>
> Yes there are "P" channel FETs, but you seldom see them in hobby circles.
> Older magazines seemed to show them more frequently.
>
> That said, I sure can't supply you with a complement to the MPF-102 or
> some other matched set. I just looked through some data books, and I
> saw nothing that showed pairs in that fashion.
>
> So it's a matter of going through lists of FETs and trying to find
> some that match up.
>
> Michael VE2BVW

2845. Re: SWR Goes Funny

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: "Al, N2NKB"
Message-ID: <8wbG4.10973$TM.673878@bgtnsc06-news.ops.worldnet.att.net>
Source record: 61725

I also find that sometimes a "snap on" choke with a couple turns of transmission cable works to choke
off currents on the coaxial cable outer conductor. This has worked for me when all else failed.
Al

glass2@glass2.lexington.ibm.com wrote in message <8ca65ndgc1@ausnews.austin.ibm.com>...
>In <oAhF4.50651$17.1103151@news4.giganews.com>, "Bob" <balbert@cnmnetwork.com> writes:
>>Sounds like a problem with the SWR indicator. Perhaps it's getting warm and
>>losing isolation. Open the unit and see what's going on there.
>>
>>I have three SWR indicators in line at all times and they don't quite agree.
>>The one that is the poorest is in the MFJ 986 tuner. It utilizes a cross
>>needle meter that is poorly calibrated. Further, the rf sampling toroid has
>>poor insulation and gives erratic readings some of the time.
>>
>>Try another SWR indicator and make a comparison. I don't imagine anything
>>in the antenna system itself is changing.
>>
>>73, Bob K6DDX
>>
>
>It very well could be the antenna system changing. Back when I was first
>licensed, I built a (5-band/80-40-20-15-10 meter) trap dipole.
>Being a student at the time, my financial
>resources were very limited. Thus, instead of the transmitting style (doorknob)
>capacitors called for in the plans for the trap,
>I used ordinary ceramic capacitors (The
>doorknob capacitors were going for about $25 each, compared to the $.05 for
>the ceramic ones.). Unfortunately, the ceramic capacitors weren't able to
>handle the RF energy in the traps, and the SWR would go from 1:1 to about
>5:1 in about 30 seconds. Of course, when the transmitter was off, the
>capacitors would cool down and the SWR would revert to 1:1.
>
>If the antenna in use is a trap style antenna, then I'd check the traps to
>see if the capacitors could be heating up and changing value (and, it doesn't
>take too much of a change to detune the traps). 10 watts isn't a lot of power,
>but if any portion of it at all is being dissipated in the capacitors, it can
>cause a rather large temperature rise, which can affect the tuning of the
>traps adversely.
>
>Anyway, it's just another thing to check.
>
>Dave

>
>P.S. Very soon after finding this, I sprung for the doorknob transmitting
>style capacitors and replaced the capacitors in the trap, which fixed the
>problem.
>
>P.P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>

2846. Re: Wanted 6063 T8 drawn Aluminum Tubing

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: W5IDX <W5IDX@worldnet.att.net>
Message-ID: <31cG4.1271$X21.65643@bgtnsc05-news.ops.worldnet.att.net>
Source record: 61726

I Would Start With Texas Towers
73's W5IDX

Nyles & Karen Priest wrote in message <38e979ae.0@windy.powercom.net>...
>Does anyone have a good source for 1.25" aluminum tubing? I need a
>replacement piece 7' 6" long and the shipping is more than the tubing
value.
>A Wisc., Illinois, Mich, oe Minn source would be best.
>73's Nyles W9KUW
>
>

2847. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8eimtl.saa.root@radioactivex.lebesque-al.net>
Source record: 61727
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy McCammon said some stuff about

>If, as has been suggested, you move the electrons one at
>a time by tweezers, and gently pluck them off one plate
>and gently place them on the other, then the field does work
>on your tweezers as you move the electrons from the charged
>plate to the other plate. If you have a sufficiently
>clever arraignment of weights and pulleys, you could use
>that work to lift some weights. You would have then
>stored the energy in a form that you could use to put the
>charges back.

Since the E-field is conservative, the wights and pullleys
don't need to be arranged very cleverly at all. Any friction
involved is additional energy you have to provide.
>
>Or you could just turn them loose and let them go ballistic,
>in which case, just before they hit the destination plate,
>they would have kinetic energy equal to the "missing"
>potential
>energy. They would smack down on the plate and produce heat
>and/or light.
>
But the assumptions didn't involve elctrodynamics (neither do
the assumptions in most circuitry).

>Or you could let them trickle through an ordinary positive
>valued resister and they would convert the kinetic energy to
>heat
>and/or light in a sequence of collisions with the resister.
>

Then the energy to move the same charge back through
the resistor to restor the original configuration would
cost you again. But the field is conservative and the
any energy going one direction has to be recovered going
back.

2848. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8ein24.saa.root@radioactivex.lebesque-al.net>
Source record: 61728
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy Lewallen said some stuff about
Re: "energy-sucking antennas": not who I seem? to usenet:
>I'm satisfied with this. I lack the curiosity (or time) to try and
>conclusively determine where the energy goes in an impossible and
>contrived circumstance. I'm satisfied to know where it goes in any
>situation that can possibly be constructed. So if the energy does
>something impossible in an impossible circuit, well, that's ok by me.
>

Your answer is just as wrong for a circuit with real resistance.
That loss is additional.

2849. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8einmt.saa.root@radioactivex.lebesque-al.net>
Source record: 61729
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Richard A. Schumacher said some stuff about
Re: "energy-sucking antennas": not who I seem? to usenet:
>
>>The analogy holds. Assuming lossless caps/cans and wires/pipes,
>>the charge/water would slosh back forth between the two indefinitely.
>>The "lost" energy is in the current of charge/water. Of course,
>>real systems have loss, so that energy quickly becomes heat
>>and is dissipated.
>
>And, for the electrical case, EM radiation. Sound could be the
>analogy to EM radiation in the water case.
>
>

The analogy fails to be precise because the forces are different.
In te water example the only force is gravity and the result
is a system which is stable against perturbations, so it can
oscillate about the potential minimum. The electric field due
to a system of charges is not a stable system. The potential that
provides stability (as in why charges stay on conductors) is
the magnetic field in the conductor. So 10 charges on a conductor
move as far apart as possible. Any oscillations will occur about
the final locations of each individual charge.

2850. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000403231353.02621.00002212@ng-cg1.aol.com>
Source record: 61730

>
>You might find it easier/less real estate to use an LM3524 or LM3525 Both
>NatSemi
>and Siemens have designs on their websites. Remember to use ferrite beads
>for RFI
>- the switching transients - aren't nice.
>
>I don't know the correct answer, but might it not be easier still to forget
>about
>generating a symmetrical a.c. signal for the transformer, and instead run a
>pumped
>inductor switchmode supply, into the filter section of the original supply
>(after
>the rectifier.)?
>
>Hamm4fun wrote:
>
>> I am trying to build a solid state replacement for a 120VAC/12DCpower
>> supply.Circuit will be an NE555 osc driving a flipflop driving a pair of
>power
>> fets.I am trying to figure what frequency I should run the osc. My guess is
>> that the origional vibrator operated at 60hz since it uses the same
>> transformeras the AC portion of the power supply, this is what I need to
>> verify.
>
>
>
>
>
>
>

The old vibrator just produce a square wave using mechanical switching. I am not trying to better that by very much. Neither am I trying to modify the existing circuit to any great deal. I just want something that will replace the vibrator. Plan is to first build something that will work on an external box that has a cable and plug Ican plug into the old viberator socket.Next paln is to put it on a chassis that will plug into the place left by the vibrator.

2851. P channel FETs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <fcdG4.162$xv1.20243@typhoon2.gnilink.net>
Source record: 61731

Is there such a thing as a small-signal, "P" channel, RF transistor? DC Electronics only sell "N" channel varieties, for instance. A complement to the MPF-102 or similar type, is what I would be interested in. Would there possibly be such a thing as a "matched, complementary, N and P pair"?.....Ed W., K3FDY.

2852. FS: MFJ-9020 QRP Transciever and Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: George Spear AA1PD <aa1pd@yahoo.com>
Message-ID: <8cbsl8$qs6$1@nnrp1.deja.com>
Source record: 61732

MFJ-9020 QRP Transciever with matching built in MFJ iambic keyer. Mint condition. A real fun QRP CW radio. 5 Watts out and Hot reciever with AGC. $100.00 including shipping in 48 States. Will ship upon reciept of your money order
--
George Spear
AA1PD
aa1pd@yahoo.com

Sent via Deja.com http://www.deja.com/
Before you buy.

2853. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: The Martell's <mike-n-terri@erols.com>
Message-ID: <38E97B25.170A7A74@erols.com>
Source record: 61733

I am NOT a licensed electrician, but had studied for the E2 test.

I believe a small building would have a Sub Panel and not just a 120v feed.

How are you feeding the building, UF cable, conduit (metal or plastic)?

A short piece of metal conduit (grounded) around the feed to the building will act like a choke and bounce a lightning hit back in the direction it came from basically isolating it from going in or out. I saw this used in the 13,800v power ducts for building feeds, helps save the transformers from hits during storms. I have seen it also used on antenna lines at the entrance to buildings.

If you have the NEC, check the section on antenna's and sub panels, might help you decide what you want to do.

L8ter..Mike..Ka1ifq

W2EB wrote:

> Ken,
>
> Now the tough part. What constitutes a separate building,
> and what constitutes a "small outbuilding"? I read the NEC.
> Clear as mud describes it very well.
> I was considering this a "small outbuilding" based on a
> couple of things:
>
> a. It's fed with 120V, not 220/240.
>
> b. It isn't separately metered.
>
> c. It's fed from a fuse in my house fusebox. NOT from the main
> entering the house.
>
> Right? Wrong?
>
> * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> The fastest and easiest way to search and participate in Usenet - Free!

2854. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: The Martell's <mike-n-terri@erols.com>
Message-ID: <38E97C51.D56E136E@erols.com>
Source record: 61734

A transformer is cheaper than a funeral! I think Radio Shack even sells an inexpensive 24v one, you can use 2 in series, or just order one from one of the electronics catalogs. Safety First!!

Mike..ka1ifq..

guest@host.com wrote:

> I'm going to need about a 48v dc supply to power some relays for
> antenna switching. I do not want to use a transformer. Can I use a
> combination of resistors and some diodes to get some crude dc from the
> 110v ac enought to power 1 relay at a time.
>
> email jprocyk@direct.ca

2855. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0404000122580001@dialup-358.hip.cam.org>
Source record: 61735

In article <20000403150907.02620.00002095@ng-cg1.aol.com>,
hamm4fun@aol.com (Hamm4fun) wrote:

> I am trying to build a solid state replacement for a 120VAC/12DCpower
> supply.Circuit will be an NE555 osc driving a flipflop driving a pair of power
> fets.I am trying to figure what frequency I should run the osc. My guess is
> that the origional vibrator operated at 60hz since it uses the same
> transformeras the AC portion of the power supply, this is what I need to
> verify.

I think you may be making it more complicated than necessary. Don't ask
me to find it, but back in 1964 or so Popular Electronics had a construction
article on building a vibrator replacement. It wasn't much more than
a couple of power transistors and resistors, and they built it into a can
that originally housed a vibrator. I'm sure I've seen similar schemes
elsewhere, though I can't point you to anywhere at the moment.

This isn't really a surprise since there were plenty of inverter power
supplies using transistors that were basically the same idea.

The Radiotron Designer's Handbook that has a section on vibrators
says they normally ran at about 100 to 120, they were cycles back then
not Herz, but I have no idea whether that was standard or not.

Michael VE2BVW

2856. Re: P channel FETs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0404000135200001@dialup-358.hip.cam.org>
Source record: 61736

In article <fcdG4.162$xv1.20243@typhoon2.gnilink.net>, "Ed W."
<edek@mail.gcnet.net> wrote:

> Is there such a thing as a small-signal, "P" channel, RF transistor? DC
> Electronics only sell "N" channel varieties, for instance. A complement to
> the MPF-102 or similar type, is what I would be interested in. Would there
> possibly be such a thing as a "matched, complementary, N and P
> pair"?.....Ed W., K3FDY.

Yes there are "P" channel FETs, but you seldom see them in hobby circles.
Older magazines seemed to show them more frequently.

That said, I sure can't supply you with a complement to the MPF-102 or
some other matched set. I just looked through some data books, and I
saw nothing that showed pairs in that fashion.

So it's a matter of going through lists of FETs and trying to find
some that match up.

Michael VE2BVW

2857. "HELP!" Tube info (4-400) (4-500)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: gudguyham@aol.com
Message-ID: <20000404072445.27878.00000892@ng-fq1.aol.com>
Source record: 61737

Hello Fellas.....Can anybody help? Would like to know the following information about tubes. First of all, What is the difference (if any) between a 4-400 and a
4-400A? Secondly, I need info on a 4-500, is it the same as a 4-400 but just newer and higher plate dissapation? Is the tube socket and filament requirements the same as a 4-400? Any info you can give me would be much appreciated.
Thanks alot.......73 Louie

2858. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38EA0502.E4A099D7@home.com>
Source record: 61738

OK -

The LM3524 and LM3525 have the gates you need to drive a HexFet - need only a resistor and capacitor to control duty cycle and timing, and they are cheap.

Hamm4fun wrote:

```
> >
> >You might find it easier/less real estate to use an LM3524 or LM3525 Both
> >NatSemi
> >and Siemens have designs on their websites. Remember to use ferrite beads
> >for RFI
> >- the switching transients - aren't nice.
> >
> >I don't know the correct answer, but might it not be easier still to forget
> >about
> >generating a symmetrical a.c. signal for the transformer, and instead run a
> >pumped
> >inductor switchmode supply, into the filter section of the original supply
> >(after
> >the rectifier.)?
> >
> >Hamm4fun wrote:
> >
> >> I am trying to build a solid state replacement for a 120VAC/12DCpower
> >> supply.Circuit will be an NE555 osc driving a flipflop driving a pair of
> >power
> >> fets.I am trying to figure what frequency I should run the osc. My guess is
> >> that the origional vibrator operated at 60hz since it uses the same
> >> transformeras the AC portion of the power supply, this is what I need to
> >> verify.
> >
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>
> The old vibrator just produce a square wave using mechanical switching. I am
> not trying to better that by very much. Neither am I trying to modify the
> existing circuit to any great deal. I just want something that will replace the
> vibrator. Plan is to first build something that will work on an external box
> that has a cable and plug Ican plug into the old viberator socket.Next paln is
> to put it on a chassis that will plug into the place left by the vibrator.
```

2859. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <38E9E378.412370DF@NOSPAMwcom.com>
Source record: 61739

Michael has the best route to follow. Remember, most transformers can be used a higher frequency within reason and it will run more efficiently. Look at a lot of old HP equipment. Most was designed to support 50 - 400 Hz. 80 to 120Hz should be fine. Also the filter circuits will be more effect at the higher frequency. Let me know if you start marketing something, I might be interested in a Mallory 1501 replacement. A very popular 6/12V 4 pin vibrator.

2860. F.S. 2-meter amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Wayne Strickland <w9bbb@megsinet.net>
Message-ID: <38E9E583.F35684B3@megsinet.net>
Source record: 61740

Hi,Got a homebrew 2-meter amp using a single 829b tube.Needs 2 watts of drv.Will put out over 70 watts.Was built in a old CB amp.Has t/r switching.Needs gnd closure for tx.With multi-function meter.$100.0 O/B Wayne

2861. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: Chuck Parsons <Chuck@CatenaryScientific.com>
Message-ID: <38E9EE9C.7EB0A2ED@CatenaryScientific.com>
Source record: 61741
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Roy McCammon wrote:

> Chuck Parsons wrote:
>
> > So when we take a limit as N->infinity we must also come from
> > the other side? So we don't know that the taylor series expansion
> > of sine or cosine actually converges?
>
> That's why we avoid infinity.
>
> Actually sine(x) has no limit as x approaches infinity.
>

Talyor series does as n-> infinity. 1/x maps real into
a space with basically identical mathematical properties.

>
> The point is a mathematical one, that if t= function
> is continuous, then the the limit is the same
> regardless of which way you approach. The particular
> function at hand did not have this property at zero,
> so you really don't get to say anything about what happens
> at zero, based only on the one sided limit.

Absolutely, and a good point. I often get in at the
end of these things because I'll read your posts because
I can't keep up with the general volume. But ISTM
that you took it too far in service of your point. If
we actually were doing this for theoretical reasons
probably the ratio of L and R would have to be
constrained as we let both or one tend to zero. But likely
there would be some physical basis for it. In a super conductor
R can go to zero but L would not and we would get a sensible
answer. As you point out transient times will become important
too; one has to think what R=0 means. Does it mean V/R
is infinite or does it mean that I^2R is 0??? My first
inclination is the latter, and to think of V/R as a limiting
case for low frequencies and low currents.

>
> But you know what I mean.

Yeah, I apologize, but you know one sided limits are used
a lot in very rigorous ways.

But in the context of this thread information like that is
like giving Ghengis Khan nuclear weapons. Soooo easy
to misuse as you point out. They really do make it much
easier to invent perpetual motion machines. As above
V/R -> infinity, I^2R -> 0, L = constant. L/R = constant,
or if we think about leakage across very large caps
area-> infinity, C-> infinity, R->0, will give a wide variety
of phenomena. Mix any two at random and you can prove
just about anything. For that reason I'll just duck out now.

So I think I've gone and proved your point. The limit doesn't
say much about R=0 unless you specify more.

Chuck

2862. Re: Vibrator replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000404101534.01362.00002159@ng-ch1.aol.com>
Source record: 61742

>
>OK -
>
>The LM3524 and LM3525 have the gates you need to drive a HexFet - need only a
>resistor and capacitor to control duty cycle and timing, and they are cheap.
>
>Hamm4fun wrote:
>
>> >
>> >You might find it easier/less real estate to use an LM3524 or LM3525 Both
>> >NatSemi
>> >and Siemens have designs on their websites. Remember to use ferrite beads
>> >for RFI
>> >- the switching transients - aren't nice.
>> >
>> >I don't know the correct answer, but might it not be easier still to
>forget
>> >about
>> >generating a symmetrical a.c. signal for the transformer, and instead run
>a
>> >pumped
>> >inductor switchmode supply, into the filter section of the original supply
>> >(after
>> >the rectifier.)?
>> >
>> >Hamm4fun wrote:
>> >
>> >> I am trying to build a solid state replacement for a 120VAC/12DCpower
>> >> supply.Circuit will be an NE555 osc driving a flipflop driving a pair of
>> >power
>> >> fets.I am trying to figure what frequency I should run the osc. My guess
>is
>> >> that the origional vibrator operated at 60hz since it uses the same
>> >> transformeras the AC portion of the power supply, this is what I need to
>> >> verify.
>> >
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>>
>> The old vibrator just produce a square wave using mechanical switching. I

>am
>> not trying to better that by very much. Neither am I trying to modify the
>> existing circuit to any great deal. I just want something that will replace
>the
>> vibrator. Plan is to first build something that will work on an external
>box
>> that has a cable and plug Ican plug into the old viberator socket.Next paln
>is
>> to put it on a chassis that will plug into the place left by the vibrator.
>
>
>
>
>
>
>

Now I get you, this sounds like the way to go.

2863. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000404103128.01362.00002162@ng-ch1.aol.com>
Source record: 61743

```
>
>TUBE CENTRAL wrote:
>>
>> Hello, Lee, on my Pyramid, I replaced mine with an LM-723 regulator, from
>radio
>> shack.
>>
>> I bought the matching socket for it...this is very important because you
>can
>> solder in the socket to the board, and then when the socket is cool, just
>press
>> in the IC...no heat damage...
>
>Be careful when socketing ICs, particularly linear parts that may dissipate
>some heat. Temperature-cycling can weaken the socket contacts until they no
>longer make good contact, which causes increased heat in the contact and
>results in possibly intermittent failure.
>
>I generally would not socket such a part; they're really not that critical
>in terms of heat damage, you're much more likely to damage the PCB if you're
>careful.
>
>When I do socket such parts, I'll use the machined-pin Augat type sockets
>which
>seem to have a decent track record with respect to thermal-cycling.
>
>--
>Dana K6JQ DoD #j
>Dana@Source.Net
>
>
>
>
>
>
```

Dana is right on the money on this. Either use a good socket or solder it in directly.
BTW: I replaced the IC in my Pyramid 30 amp supply with a 723.

2864. testing transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-04 00:00:00 UTC
From: K4nky <k4nky@arrl.org>
Message-ID: <sek25uiseop54@corp.supernews.com>
Source record: 61744

i have a cb radio someone gave and want to convert to 10 meters...did not have any recieve and found broken lead to so-239...recive ok now but no transmit suspect that maybe they keyed into open and blew final...can i test the transistor without removing it from the rig...its a 2cs2078 in a 220 case

2865. Homebrew thermo-controller?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: aj <ahall@uiuc.edu>
Message-ID: <ahall-FBCD38.15271405042000@news.cso.uiuc.edu>
Source record: 61545

Hello everyone,

This is not a radio question, but since we're all home-brewers here, I was wondering if you guys had any thoughts on how to make a thermal-controller for the lab.

The way a thermal controller generally works... it monitors the voltage signal from a type K thermocouple (voltage is directly related to temperature), and turns on or off an AC plug (which a heating element is plugged into... no need to change the voltage or power).

So, basically, we need the ability to set the desired temperature (voltage to compare the thermo-couple to), and the ability to turn on and off the heating element... on if the voltage is less, off if the voltage is more than desired.

These things are a pretty penny in the lab-catalogues... but then again, most of that stuff is ramped up in price anyways because they usually sell to institutions.

The application seems relatively simple, but I'm not a great electrician... any thoughts on this?

Please e-mail me your replies. I'll try and keep up with the news-group, but I'd hate to miss your reply!

Thanks a ton!

-Allen Hall (n9rzc)
n9rzc@uiuc.edu

ps- again, sorry for the non-radio question... but I figured who better to ask than my ham pals!!

2866. Microwave homebrewing

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Robert Lyons <boblyons@umich.edu>
Message-ID: <38EBADDF.12D85258@umich.edu>
Source record: 61546

Howdy, all -

I have a couple old X/K radar detectors that I'd like to
use in microwave experiments. Some questions for the
knowlegable among you:

- What's the best (cheap) way to adjust the frequency?
Is there an inexpensive microwave freq counter, or perhaps
a clever device I can build?

- What is the legality of using a radar detector without
readjusting the frequency? They apparently radiate RF
even in their original application, so are they then
Part-15 compliant? or licensed somehow?

I'd love to hear any success stories out there. I've found
many of the web sites related to microwave ops, but some
email exchanges with experienced microwave homebrewers would
be appreciated.

73 de Bob, KI8AB

2867. FA: HP RF Signal Generator - no reserve-on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <3oOG4.104$U3.8611@newsfeed.avtel.net>
Source record: 61547
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Great Classic Hewlett Packard RF Signal Generator. No Reserve!

See it at:
http://www.electronbay.com/lot.cfm?lotID=131

2868. For Sale!- Leader LBO-5860A Waveform Monitor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Steve <odin@webspan.net>
Message-ID: <senggslsrfg122@corp.supernews.com>
Source record: 61548
Cross-posted to:
alt.ham-radio.marketplace,rec.audio.tech,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

A-1 condition electrically and Good cosmetically. Older unit and therefore has seen some bench wear (scratches etc.). Newest model "C" by Leader sells for $1850.00 BUT units are essentially the same animal!!! Go figure... Anyway asking $425.00 plus shipping from New York.

TNX

Steve

2869. Re: Microwave homebrewing

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: quatsein@island.net
Message-ID: <38ebc611.77963518@news.cr.island.net>
Source record: 61549

Bob, in 73 magazine, Chuck Houghton has been providing info
on microwaves for years. If your can get copies of the "Above and
Beyond" column, it will be like a users manual for microwaves.

Steve Carlisle

On Wed, 05 Apr 2000 17:20:09 -0400, Robert Lyons <boblyons@umich.edu>
wrote:

>Howdy, all -
>
>I have a couple old X/K radar detectors that I'd like to
>use in microwave experiments. Some questions for the
>knowlegable among you:
>
>- What's the best (cheap) way to adjust the frequency?
> Is there an inexpensive microwave freq counter, or perhaps
> a clever device I can build?
>
>- What is the legality of using a radar detector without
> readjusting the frequency? They apparently radiate RF
> even in their original application, so are they then
> Part-15 compliant? or licensed somehow?
>
>I'd love to hear any success stories out there. I've found
>many of the web sites related to microwave ops, but some
>email exchanges with experienced microwave homebrewers would
>be appreciated.
>
>73 de Bob, KI8AB

2870. Re: FA: HP RF Signal Generator - no reserve-on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38EBD44A.BC56B024@agilent.com>
Source record: 61550
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Pardon my ignorance, but what exactly does "No Reserve" mean? (I
notice there's a $100 minimum...I thought "no reserve" meant no min,
but obviously that's wrong.)

Cheers,
Tom

Mike wrote:

> Great Classic Hewlett Packard RF Signal Generator. No Reserve!
>
>

2871. Re: Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: ham_guy@webtv.net
Message-ID: <8943-38EBCFDE-48@storefull-132.iap.bryant.webtv.net>
Source record: 61551

That the output power diminishes with decreasing battery voltage, is entirely reasonable. As a case in point, look at the Yaesu FT-50 handy talkie. To obtain the full 5 watts output, you must use one of the batteries that provides 9.6 volts. Lower voltage batteries = lower output power.
Personally, I would favor adding a cell to increase voltage than to use resistance to decrease it, thereby consuming more power. The batteries we used in the 1950's had lead straps across the top that connected the cells. You could drill into any of these straps, insert a self-tapping screw and come up with about any voltage you wanted. These new batteries are made a lot cheaper now and I don't believe there is a strap to drill into. I don't know how they connect the cells in these.... might bust the case off a dead one and take a look see. 73
Guy

2872. Re: Engine driven DC Power Supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: ham_guy@webtv.net
Message-ID: <8943-38EBD20F-49@storefull-132.iap.bryant.webtv.net>
Source record: 61552

To avoid voltage spikes when keying the rig, I believe I would just run off the batteries. If they got too low, shut down the station while your 35 amps built the power back up. I don't know how you would know when the charging was complete, but there must be something at Auto Zone that would check the amount of charge in the batteries. That would be a lot safer for the components in your transeiver and a lot quieter while you were copying DX. 73 Guy

2873. Re: FA: HP RF Signal Generator - no reserve-on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38EBCCDE.59AC@pop.removethistomailme.net>
Source record: 61553
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Tom Bruhns wrote:
>
> Pardon my ignorance, but what exactly does "No Reserve" mean? (I
> notice there's a $100 minimum...I thought "no reserve" meant no min,
> but obviously that's wrong.)
>
> Cheers,
> Tom
>
> Mike wrote:
>
> > Great Classic Hewlett Packard RF Signal Generator. No Reserve!
> >
> >

A reserve is the price, chosen by the seller, below which either the seller or the buyer can opt out of the transaction. It's generally not disclosed -- when you bid on a reserve auction, you don't know if a bid of a given amount will meet the reserve until you actually bid.

Personally, I don't like reserves and don't see the point in using them. I always set a reasonable minimum bid and let the market do what it wants.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

2874. WTB: Versa-Count LA-150 Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: "Wallace E. Steinbrecher" <wsteinbr@denalics.net>
Message-ID: <38EC2C9D.1012ABF5@denalics.net>
Source record: 61554

I would like to purchase a copy (or original) operation and/or service
manual for this BCB power amplifier. Please respond to the address
below:
wsteinbr@denailcs.net

2875. Need 1974 article from 73 Magazine

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8cfn2p$qfu1@icet.net.nih.gov>
Source record: 61555

Greetings. I am looking for an article from 73 Magazine, February 1974. On page 100 is a superregenerative receiver schematic and I would like to get a copy of the schematic and article that goes with it. Will pay reasonable copying / mailing costs. Thanks!

Andy Mitz (WA3LTJ)
arm@gnode.org

2876. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: "c.wright" <c.wright@auckland.ac.nz>
Message-ID: <38EA77C3.A93D0613@auckland.ac.nz>
Source record: 61670

The Martell's wrote:

> A transformer is cheaper than a funeral! I think Radio Shack even sells an
> inexpensive 24v one, you can use 2 in series, or just order one from one
> of the electronics catalogs. Safety First!!
>
> Mike..ka1ifq..
>
> guest@host.com wrote:
>
> > I'm going to need about a 48v dc supply to power some relays for
> > antenna switching. I do not want to use a transformer. Can I use a
> > combination of resistors and some diodes to get some crude dc from the
> > 110v ac enought to power 1 relay at a time.
> >
> > email jprocyk@direct.ca

I know you tend to get a bit casual in the US with your 117volt outlets, but
please don't even think about doing it according to your suggestions!
Ther are many sources of suitable transformers. Some suggestions-
Old electric blanket controllers (low voltage type).
Old Stereo amplifier transformers (these are most likely in the right area of
output voltage).
Quartz halogen lighting tansformers. These are common these days and run from
12 volts to 48 volts output.
Any supply using a non polarised plug, even with only 117 volts is an accident
waiting to happen. Don't forget anything hooked up to the circuits from the
relay units can also
energised unless the supply is totally isolated.

Regards Cliff ZL1BDA

2877. Re: MRF449A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8ce0ko$6q2$1@nnrp1.deja.com>
Source record: 61671

In article <lPtG4.1781$sB3.1014@news.indigo.ie>,
"Tony Walsh" <ei5em@gofree.indigo.ie> wrote:
> Anybody know where in Europe I can find a supplier for a MRF449A
transistor?
>
> Mni Tnx de Tony EI5EM
>
>

Dial lectronics in UK seems to have it. The URL is:
http://www.dialelectronics.co.uk/m23.htm
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2878. Re: MRF449A

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8ce0l1$6q4$1@nnrp1.deja.com>
Source record: 61672

In article <lPtG4.1781$sB3.1014@news.indigo.ie>,
"Tony Walsh" <ei5em@gofree.indigo.ie> wrote:
> Anybody know where in Europe I can find a supplier for a MRF449A
transistor?
>
> Mni Tnx de Tony EI5EM
>
>

Dial Electronics in UK seems to have it. The URL is:
http://www.dialelectronics.co.uk/m23.htm
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2879. Re: FS: EICO Scope Model 435

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000404204657.14348.00002206@ng-md1.aol.com>
Source record: 61673

>
>Small scope, very nice unit, Model 435, will cover up to 3.5 - 4 Mhz. I have
>all the manuals and two probes. This is a single channel scope. Its
>available for $ 35.00 plus shipping. John
>
>
>
>
>
>
>
>
>
>

If this is in good shape it makes a good modulation monitor and I think it has
a sweep voltage output that can be used to control a VCO.

2880. Re: Need a "liquid plastic"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: tbruce2@bellsouth.net
Message-ID: <38eba73e.3277442@news.atl.bellsouth.net>
Source record: 61674

If it's polycarbonate, try this:

http://www.micro-tools.com/merchant.mv?Screen=PROD&Store_Code=Micro-Tools&Product_Code=CA40H

On Fri, 31 Mar 2000 02:33:16 -0500, "Fred" <fdecker@compuserve.com>
wrote:

>I want to fill holes in stripped plastic screw posts, then redrill them so
>that I can re-use the self tapping screws to hold circuit boards in. Can
>anyone recommend a good substance that might work? I thought about "plastic
>wood" or some kind of epoxy, but didn't want something too hard or too soft.
>Thanks.

2881. Re: P channel FETs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <m8yG4.163$kk2.26206@typhoon1.gnilink.net>
Source record: 61675

Thanks, Michael:
It is good then to know that the P channel FETs are out there yet? Instead of using a proposed "differential amp." for a balanced input RF amp. and the resultant output coupling problems, why couldn't I use a "complementary pair" of N and P type FETs instead? Wouldn't this configuration yield a "common source" output connection for a simpler method of R/C coupling into a single-ended, emitter follower or what-not?
Regards, Ed W.

Michael Black wrote in message ...
>In article <fcdG4.162$xv1.20243@typhoon2.gnilink.net>, "Ed W."
><edek@mail.gcnet.net> wrote:
>
>> Is there such a thing as a small-signal, "P" channel, RF transistor? DC
>> Electronics only sell "N" channel varieties, for instance. A complement
to
>> the MPF-102 or similar type, is what I would be interested in. Would
there
>> possibly be such a thing as a "matched, complementary, N and P
>> pair"?.....Ed W., K3FDY.
>
>Yes there are "P" channel FETs, but you seldom see them in hobby circles.
>Older magazines seemed to show them more frequently.
>
>That said, I sure can't supply you with a complement to the MPF-102 or
>some other matched set. I just looked through some data books, and I
>saw nothing that showed pairs in that fashion.
>
>So it's a matter of going through lists of FETs and trying to find
>some that match up.
>
> Michael VE2BVW

2882. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <58nles02dn5sk1hc8u53uu4bm49m9fa70v@4ax.com>
Source record: 61676

On Thu, 30 Mar 2000 08:31:23 GMT, guest@host.com wrote:

>I'm going to need about a 48v dc supply to power some relays for
>antenna switching. I do not want to use a transformer.

Since you are talking about antenna switching, I assume the relays are outside and thus, any leakage can be very hazardous.

>Can I use a
>combination of resistors and some diodes to get some crude dc from the
>110v ac enought to power 1 relay at a time.

If everything is inside in a dry environment in a well isolated box (which is questionable in the case of an antenna switcher :-), some low current power supplies could be constructed using capacitors as the current limiting element (both in the live and neutral connection), thus, avoiding the huge power dissipation due to a series resistor. A 1 uF capacitor will have a reactance about 2700 ohms at 60 Hz, thus, maybe 10-20 mA of useful current could be extracted (due to two 1 uF capacitors in series, one in the live connection and one in the neutral connection, thus not needing a polarised plug). A bridge rectifier and a small filter capacitor would also be needed to power the relay. The application would be floating around 60 Vac, thus all external connections would require opto isolators, transformers or relays.

This trick is useful for powering some stand-alone CMOS timers or other very low power devices, in which the series capacitance could be down in the 10 - 100 nF area and even with an isolation fault in the box, the leakage current would be limited to a few mA due to the reactance of the capacitor.

However, I would not recommend such practice for an antenna switcher, especially if the device is used outside due to safety reasons. There would also be problems of how to activate the relays, since the relay supply would be floating. Finding 100 - 1000 nF capacitors with required AC voltage ratings will be hard and their size would be larger and price would definitely be higher than a cheap transformer.

While it may be problematic to find cheap transformers directly suitable for 48 V, there are a lot of wall warts that give out either 16 Vac or 24 Vac and with a suitable doubler or tripler, the voltage can be increased to 48 Vdc.

2883. Re: XTAL BP-filter ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Morgan Gunnarsson <di98gumo@chl.chalmers.se>
Message-ID: <38EB1D11.F18F2AB7@chl.chalmers.se>
Source record: 61677
Cross-posted to: sci.electronics.design,rec.radio.amateur.digital.misc,alt.radio.pirate,rec.radio.amateur.homebrew

Huffy wrote:
>
> In article <38E8B83A.BCDA39A5@chl.chalmers.se>, Morgan Gunnarsson
> <di98gumo@chl.chalmers.se> wrote:
>
> > Is it possible to construct a BP-filter by using a XTAL,
> > where the filter's middle freq. equals the XTAL's resonans freq.?
> >
> > Morgan
>
> Crystal filters tend to have very narrow bandwidth. If you want a filter
> for wideband FM, then you'll need something else.
>
> --Huffy

I'm going to use it for BPSK demodulation, but maybe it's better to
cascade
a LP with a HP (using two op amps, 2x2 resitors and 2x2 capacitors)? The
problem is that I want to be able to change the received frequency in a
simple way; can the BP filter be syncronized with the local oscillator?

Morgan

2884. Re: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: TB <tb124@aol.com>
Message-ID: <4qGG4.112$Zl2.4159@news.uswest.net>
Source record: 61678
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Why just list the damn thing on eBay and be done with it. I am sure anyone
who needs parts has already seen your ad. I for one am tired of seeing it
every 2-3 days.

servis_za_elektroniku@iname.com wrote in message
<38e67a2b.21618022@news.eunet.yu>...
>For sale parts for FT-101Z.
>
>Ask what you need and make an offer. All parts are in good working
>conditions unless otherwise noted.
>
>Buyer to pay S/H.
>
>Send all inquires to: servis_za_elektroniku@iname.com

2885. Homebrew antenna switch - what components to use.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Tom Barber <trbarber@earthling.net>
Message-ID: <xHGG4.180$ZI2.4637@news.uswest.net>
Source record: 61679

Hello all,

I am planning to construct my own antenna switch (not remote) and am unsure of which type switch to use. I will be using the switch with no more than 350 watts from 160 to 10 meters. The SWR is never over 4:1. Can I use high voltage toggle switches wiring both sides parallel into a single pole single throw. I will have one switch for each output and will only use one switch at a time. Thanks in advance.

Tom - KK7PX
"May all your signals be rare DX"

2886. Help with AN6605 package

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Andrej Laudis <laudis@my-deja.com>
Message-ID: <8cffalpah1@nnrp1.deja.com>
Source record: 61680

Hello all,

i buy new AN6605, but it's in SMD. It have one big pin (maybe GND) and another 5 pins. In my PCB I have older 8-pin DIL version. Have anyone catalog and can describe me, which pin in DIL is which pin in SMD and name of each pin?

Thanks very much for help.

Andy/OM1CW

Sent via Deja.com http://www.deja.com/
Before you buy.

2887. Re: Engine driven DC Power Supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8cfg8j$1lv6$1@ausnews.austin.ibm.com>
Source record: 61681

In <8cduh8$4i6$1@nnrp1.deja.com>, CessnaPilot <stinson108@my-deja.com> writes:
>Okay, here's the deal: Shack has no AC source and is far from any so it runs
>off batteries and solar panel. I decided to try to activate an old tube rig
>that draws 22 amps which would deplete the batteries in short order. So... I
>went to the local flea market and came home with a 4 HP lawn mower engine and
>a Ford alternator. The alternator has a built-in regulator. The idea is to
>kick in the 35 DC amps when running the old tube rig. My first concern is
>being able to hear a weak DX over the noise of the engine. I can move it a
>couple hundred feet from the shack, but don't know if the voltage drop would
>be a problem. Have you or your friends ever tried or done this? Any
>suggestions or comments? It sounds like a good idea to me, but then so did
>some other things I've tried that I won't be doing again. All opinions
>respected. TNX, Stinson
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

Theoretically, it'll work, but there are some design considerations that
you should take into account. Yes, the gasoline engine will be noisy.
However, with a suitable muffler, that noise can be minimized. Don't
settle for the tiny muffler that are typically installed, but, instead,
go for a larger muffler with better sound deadening construction. Also,
pay attention to the orientation of the muffler. But, what ever you do,
make absolutely sure that the exhaust if vented well away from you. Not
only is Carbon Monoxide posioning no fun, it is deadly!

One approach that might be worth considering is to use a sound shield between
the generator and your operating position. Just a piece of wood can divert
a significant amount of sound energy. Also, consider shrubs or trees, too
(but, don't let the exhaust poison them). However, don't let the sound
shield restrict the ventilation and cooling for the engine.

There should be a body of literature available concerning such installations,
since quite a few people use generators for emergency supplies. And, when
you consider the number that use generators for the Field Day exercise, someone
has surely tried this.

It will require some very heavy cables to conduct the 35 amps without an
appreciable voltage drop (and, I assume that you are dealing with a 12
volt source, so you haven't got much voltage to spare). The obvious
approach is to determine how much drop you can tolerate, then find out
what resistance you can tolerate with 35 amps flowing. Finally, use a
chart of cable sizes versus resistance to find how big of cables you'll
need (And, don't forget to account for the drop in both sides.). My

guess is that you'll find that you want to keep the run fairly short.

An added consideration is that you may want to consider the inductance of the cables. Two parallel conductors won't have much inductance (especially if they're run close to each other so the magnetic fields cancel), but, if you're switching 35 amps, and are only dealing with 12 volts, a small amount of inductance can result in some fairly large voltage swings. Make sure that the keying of the transmitter doesn't result in voltage spikes large enough to fry a component (I'm told that the inductive surge caused by operating the starter in a car can result in 80+ volt surges on the 12 volt system.).

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2888. Re: Tube Manufacturing Notes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8cfhd0$1lv6$2@ausnews.austin.ibm.com>
Source record: 61682

In <8cduqc$1nt$1@news.igs.net>, "TDLW" <thelma@hawk.igs.net> writes:
>I would appreciate receiving suggestions on what should be done with my
>collection of manufacturing notes from a period in my dim and distant past
>making 7 & 9 pin receiving tubes for RCA. I also have some of my father's
>notes which go back to the earliest days, WD 11's etc. There is also a
>collection of approx 100+ tube manuals, equivalent lists etc including 7
>Vade-Mecum, Barabini, UK CV listings, Jan Mil equivalents, a Sylvania
>Puurchasing Source Book...approx 500 pages of print-out, etc plus, totally
>unrelated...a 1921 Vol 1 Automobile Green Book, New England States.
>
>Sam W

I assume that RCA doesn't have a museum and wouldn't be interested
in the materials, would they?

You could try to find a museum which specializes in electronic
devices, or, even more appropriately, vaccum tubes. I've seen some
sites on the web, but I don't recall the address (although a quick
search should come up with a few). Most of these are small, but I'm
sure that some would appreciate a donation of some of the materials.

You might also drop a note to the ARRL (www.arrl.org) to see if they
might be interested in some of the material for their museum.

You could also scan (some of) them and post them on the web. I'm
sure there are quite a few people who would be interested in reading
them.

Or, you could try to auction the stuff on e-bay.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2889. Re: XTAL BP-filter ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: W6RCecilA <Cecil.A.Moore@IEEE.org>
Message-ID: <38EB4ADF.520E1D43@IEEE.org>
Source record: 61683
Cross-posted to: sci.electronics.design,rec.radio.amateur.digital.misc,alt.radio.pirate,rec.radio.amateur.homebrew

Morgan Gunnarsson wrote:
> can the BP filter be syncronized with the local oscillator?

Yep, that's how a filter in the IF works. I assume you are
not talking about a direct conversion receiver.
--
73, Cecil, W6RCA http://www.mindspring.com/~w6rca

2890. Re: P channel FETs.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: david@slack.com
Message-ID: <8cflabbtc1@spies.com>
Source record: 61684

In article <NjyG4.4850$xz1.164228@cac1.rdr.news.psi.ca>,
David Snowdon <norway@interlog.com> wrote:
>B.G. Micro is selling them for a pretty cheap price. See www.bgmicro.com

Those are BSS92 P channel enhancement MOSFETs, not the P channel JFETs
the original poster was asking about. I suspect the gate capacitance
is a bit high for small signal RF use.

Some common P channel JFETs: J175, 2N4360, 2N5461

2891. 6cm hpa's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Tim Wilson <tim@cmwave.com>
Message-ID: <38EB5E8A.8A0DA97A@cmwave.com>
Source record: 61685

FS quantity 4 Varian vzj2700d4 3kw klystron hpa's. complete and operational with solid state ipa's and 80 dB of gain. wr-137 input and output. 20 dB manual attenuator. 208 volts three phase. Full metering: beam voltage, beam current, body current, reflected power, forward power (4000 watts), drive power, filament volts and current, beam and filament hours. Many spares including klystrons,
filament and beam transformers, 3 phase autotransformers, meters, wiring harnesses, and more.
These amps have either 12 or 24 channel tubes and will make >3kw across any 40 mHz. bandwidth.
Higher power outputs are easily obtainable with reduced bandwidth tuning of the klystron. The tube is a Varian va936 series, 5 cavity. Typical operating parameters are 8kv@1 amp with PO about 3 kw. I
have operated the amps at 8.5kv with output near 4kw. The beam power supply is variable from about 4 kv up to about 10 kv. The amp has arc detection and shutdown, as well as an output isolator.
For more specific information please e-mail or phone. SERIOUS INQUIRES ONLY! THESE ARE NOT TOYS!

Tim Wilson
Carolina Microwave
770-322-7522
tim@cmwave.com

2892. Re: Need a "liquid plastic"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000405121423.14370.00002352@ng-md1.aol.com>
Source record: 61686

>
>>I want to fill holes in stripped plastic screw posts, then redrill them so
>>that I can re-use the self tapping screws to hold circuit boards in. Can
>>anyone recommend a good substance that might work? I thought about "plastic
>>wood" or some kind of epoxy, but didn't want something too hard or too soft.
>>Thanks.
>
>
>
>
>
>
>
15 minute epoxy works fine for this. Wax the screws then put the epoxy inthe
holes and go ahead and put the screws in with the circuit board out. When it
sets take the screws out and mount the board. No drilling required

2893. Re: "HELP!" Tube info (4-400) (4-500)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: meas+ures@vcnet.com
Message-ID: <meas+ures-0504000916090001@port140.dial.vcnet.com>
Source record: 61687

In article <20000404072445.27878.00000892@ng-fq1.aol.com>,
gudguyham@aol.com (Gudguyham) wrote:

> ..... I need info on a 4-500,.....

The 4-500A has a 10v, 10.2a filament. Max. ratings are 450mA at 4000v.
Max screen potential is 1000v. The constant curves indicate that the
450mA rating is probably conservative for SSB service. .

--
- Rich... 805.386.3734.
www.vcnet.com/measures, remove plus from adr.

2894. Re: Pyramid PS IC?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000405121933.14370.00002354@ng-md1.aol.com>
Source record: 61688

>
>Thanks very much! You learn something new everyday withn help from folks
>like
>yourself. So far so good, but will definiteloy keep it in mind on any future
>problem.
>
> BTW, the transformer in this unit runs pretty hot to the touch...is this a
>normal occurance in the larger Pyramids? I got this on a trade for some old
>CB
>equipment... I will be buying an Astron in the future...
> Best regards, Joe Pratt
>

This is normal on the Pyramids.

2895. Re: Battery Power

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: "H.G." <garciah@flash.net>
Message-ID: <AjKG4.1097$hh2.57940@news.flash.net>
Source record: 61689

A solution that can be used to boost the 12 volts supply to higher levels is to use an isolated 12 Volts in 5 Volts out DC-DC converter with voltage feed back.

The input of the converter across the battery contacts and the output of the converter in series with the positive borne of the battery (the negative side of the converter), taking the output voltage from the negative side of the battery and the positive side of the DC converter.

The voltage feedback has to be changed (the negative side to battery ground) and the resistor values adjusted to give the output voltage you need.

I have used this arrangement to maintain 13 Volts out with decreasing battery voltage which can be as low as 9.5 volts battery voltage.

If I remember right VICOR has several Bricks DC converters that can be used for that purpose (the one I used were my own design)

H.G.

Larry Benko wrote in message <38E0D9BD.6EF77EF1@aztek-eng.com>...
>I am planning on doing Field Day this year with my
>Icom-756 transceiver running from some large deep
>discharge 12V batteries that I have. In the process
>of measuring power requirements etc. I have noticed
>that the transceiver outputs 100w (to a dummy load)
>only for input voltages greater than 12.9V. For
>lower voltages the power progressively is reduced and
>for voltages less than 11.0V it shuts off. Clearly
>this is acceptable for a situation where batteries are
>being charged but when running off the batteries only,
>the transceiver does not allow for the batteries to be
>discharged very far before shutting down.
>
>Enough for the history. Has anyone ever seen a device to
>take a battery feet and boost the voltage a few volts?
>This device would need to function for current draws of 20A
>and be able to disable itself if the battery was being
>charged since the transceiver has a maximum input voltage
>of 16V. Conceptually this device could be an isolated 0 to
>3V 20A supply that could be placed in series with the actual
>battery and thus would be a much smaller device.
>
>Thank and 73,
>Larry Benko, W0QE

2896. Wanted: Yeasu FT77s.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: John <john@mm1dsp.freeserve.co.uk>
Message-ID: <8cfrifbvj4@news8.svr.pol.co.uk>
Source record: 61690

I'm looking for a Yaesu FT77s rig.
Please reply direct to the address below.

Many thanks.
John.

john@mm1dsp.freeserve.co.uk

2897. Re: testing transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: "E. Skelton" <Xnospam@oceanfree.net>
Message-ID: <954924180.371155017@news.indigo.ie>
Source record: 61691

"K4nky" <k4nky@arrl.org> wrote:
>i have a cb radio someone gave and want to convert to 10 meters...did not
>have any recieve and found broken lead to so-239...recive ok now but no
>transmit suspect that maybe they keyed into open and blew final...can i test
>the transistor without removing it from the rig...its a 2cs2078 in a 220
>case

Remove the transistor and use a multi-meter to check the
diode junctions from emitter to base and from base to
collector. Looking at the front of the transistor with the
leads pointing towards you, the connections are:

1 Base
2 Collector (Heat Sink Tab)
3 Emitter

73, Ed. EI9GQ.

--

Remove 'X' to reply.

EI9GQ homebrew radio page http://www.qsl.net/ei9gq

2898. 8950 Data?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Roland Burgan <rburgan@up.net>
Message-ID: <38EB7BE0.EAD37FA7@up.net>
Source record: 61692

I am looking for the charactoristic data for
the 8950 Sweep Tube.
Thanks in advance for any help.

Roland, KB8XI

2899. FT-757GX

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: ed <edholmes@renc.igs.net>
Message-ID: <38EB83DB.732B61B6@renc.igs.net>
Source record: 61693

Looking for info on this receiver, good, bad or any internet links, please.

2900. Re: Homebrew antenna switch - what components to use.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-05 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <NhMG4.13461$9g4.483677@news5.giganews.com>
Source record: 61694

You would do best with a ceramic insulated rotary switch. The ceramic is low loss and has a high dielectric strength. Low capacitance across contacts. Get one with substantial contacts, as you will be carrying considerable current.

And of course, never hot switch an antenna switch or you may damage the switch and your transmitter.

73, Bob K6DDX

2901. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8cgmo0$2hq$1@campus3.mtu.edu>
Source record: 61556

Reg Edwards <G4fgq.Regp@btinternet.com> wrote:
> It is often reported the SWR cannot be brought down to better than say
> 1.1 to 1 even when using an ATU.

> If it is possible to obtain an SWR as low as that, then, by a very
> small readjustment of the ATU, 1 to 1 should be possible. So what's
> wrong ?

<some insightful commentary snipped>

--> Sometimes I've found that it's simply that the SWR null is very, very
sharp. It can be really easy to go from one 1.1 point to the other, and
totally miss that little dip in the middle, unless I'm very careful with
the tuning.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Eventually, the world will stop turning due to friction from red tape."
-- Marcus D. Watts

2902. Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <G1SG4.4440$T04.21387@typhoon.ne.mediaone.net>
Source record: 61557

I am looking for instructions for a homebrew notch filter.
If anyone knows where to find any on the web you can
e-mail me at: leavittkid@mediaone.net.

Thanks

Drew Leavitt
AA1UZ

2903. Re: Engine driven DC Power Supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <38EBFCE3.7D32C4EA@webaxs.net>
Source record: 61558

Some alternators have an extra voltage sense wire. With one of these, you can run
the sense wire back to the shack where your batteries are, compensating for any and
all voltage drop from the alternator. I had a lucas alternator (with inbuilt regulator)
in a mini that had this extra wire.

glass2@glass2.lexington.ibm.com wrote:
>
> In <8cduh8$4i6$1@nnrp1.deja.com>, CessnaPilot <stinson108@my-deja.com> writes:
> >Okay, here's the deal: Shack has no AC source and is far from any so it runs
> >off batteries and solar panel. I decided to try to activate an old tube rig
> >that draws 22 amps which would deplete the batteries in short order. So... I
> >went to the local flea market and came home with a 4 HP lawn mower engine and
> >a Ford alternator. The alternator has a built-in regulator. The idea is to
> >kick in the 35 DC amps when running the old tube rig. My first concern is
> >being able to hear a weak DX over the noise of the engine. I can move it a
> >couple hundred feet from the shack, but don't know if the voltage drop would
> >be a problem. Have you or your friends ever tried or done this? Any
> >suggestions or comments? It sounds like a good idea to me, but then so did
> >some other things I've tried that I won't be doing again. All opinions
> >respected. TNX, Stinson
> >
> >
> >Sent via Deja.com http://www.deja.com/
> >Before you buy.
>
> Theoretically, it'll work, but there are some design considerations that
> you should take into account. Yes, the gasoline engine will be noisy.
> However, with a suitable muffler, that noise can be minimized. Don't
> settle for the tiny muffler that are typically installed, but, instead,
> go for a larger muffler with better sound deadening construction. Also,
> pay attention to the orientation of the muffler. But, what ever you do,
> make absolutely sure that the exhaust if vented well away from you. Not
> only is Carbon Monoxide posioning no fun, it is deadly!
>
> One approach that might be worth considering is to use a sound shield between
> the generator and your operating position. Just a piece of wood can divert
> a significant amount of sound energy. Also, consider shrubs or trees, too
> (but, don't let the exhaust poison them). However, don't let the sound
> shield restrict the ventilation and cooling for the engine.
>
> There should be a body of literature available concerning such installations,
> since quite a few people use generators for emergency supplies. And, when
> you consider the number that use generators for the Field Day exercise, someone
> has surely tried this.

>
> It will require some very heavy cables to conduct the 35 amps without an
> appreciable voltage drop (and, I assume that you are dealing with a 12
> volt source, so you haven't got much voltage to spare). The obvious
> approach is to determine how much drop you can tolerate, then find out
> what resistance you can tolerate with 35 amps flowing. Finally, use a
> chart of cable sizes versus resistance to find how big of cables you'll
> need (And, don't forget to account for the drop in both sides.). My
> guess is that you'll find that you want to keep the run fairly short.
>
> An added consideration is that you may want to consider the inductance of
> the cables. Two parallel conductors won't have much inductance (especially
> if they're run close to each other so the magnetic fields cancel), but,
> if you're switching 35 amps, and are only dealing with 12 volts, a small
> amount of inductance can result in some fairly large voltage swings. Make
> sure that the keying of the transmitter doesn't result in voltage spikes
> large enough to fry a component (I'm told that the inductive surge caused
> by operating the starter in a car can result in 80+ volt surges on the
> 12 volt system.).
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2904. rec.radio.amateur.boatanchors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: jetfuel <wa1vqy@efortress.com>
Message-ID: <6cUG4.3202$n8.592389@news-east.usenetserver.com>
Source record: 61559

Is the boatanchors news group still operating?? I have trouble connecting
to it and when I get in, there aren't any messages posted there. Thanks
Jeff WA1VQY@EFORTRESS.COM

2905. 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: "Dr. P. Seifert" <p.seifert@profile-optsys.com>
Message-ID: <8ci0av$1tod$1@euler.space.net>
Source record: 61560

Hi everybody.

I just purchased a bundle of AD 9854 DDS chips and am looking now for the different possibilities to realize a 300 MHz clock with very low sideband noise.
Does anybody have some suggestions / references or experiences which could help me with this topic?

73, Pedro, DF3YB

2906. Re: rec.radio.amateur.boatanchors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38ECAFF2.A92F481C@home.com>
Source record: 61561

works ok for me

I have had some netscape problems this week. I think that the chortling over
M$oft's problems has had them distracted.

Jack

jetfuel wrote:

> Is the boatanchors news group still operating?? I have trouble connecting
> to it and when I get in, there aren't any messages posted there. Thanks
> Jeff WA1VQY@EFORTRESS.COM

2907. Re: Homebrew thermo-controller?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <38ECB119.F6DA9D25@home.com>
Source record: 61562

The easy way to do this is with a PIC, even easier still with a Stamp I, Stamp II or BX-24 which program in readily understandable languages.

Monitor the voltage with an ADC - I use serial devices since they take fewer pins.

Turn the heat on or off with a relay, or you can use an optocoupler (MOC3010) and a triac (MAC8 or any of the husky ones from Motorola, etc.)

Jack

aj wrote:

> Hello everyone,
>
> This is not a radio question, but since we're all home-brewers here, I
> was wondering if you guys had any thoughts on how to make a
> thermal-controller for the lab.
>
> The way a thermal controller generally works... it monitors the voltage
> signal from a type K thermocouple (voltage is directly related to
> temperature), and turns on or off an AC plug (which a heating element is
> plugged into... no need to change the voltage or power).
>
> So, basically, we need the ability to set the desired temperature
> (voltage to compare the thermo-couple to), and the ability to turn on
> and off the heating element... on if the voltage is less, off if the
> voltage is more than desired.
>
> These things are a pretty penny in the lab-catalogues... but then again,
> most of that stuff is ramped up in price anyways because they usually
> sell to institutions.
>
> The application seems relatively simple, but I'm not a great
> electrician... any thoughts on this?
>
> Please e-mail me your replies. I'll try and keep up with the
> news-group, but I'd hate to miss your reply!
>
> Thanks a ton!
>
> -Allen Hall (n9rzc)
> n9rzc@uiuc.edu
>
> ps- again, sorry for the non-radio question... but I figured who better
> to ask than my ham pals!!

2908. FS: HP, Tek Test Equipment incl. microwave stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Spencer Webb <webb@alum.mit.edu>
Message-ID: <Rw0H4.92$lW1.9857@news.shore.net>
Source record: 61563
Cross-posted to: ne.forsale,rec.radio.amateur.homebrew,rec.radio.swap

April 6, 2000

I am posting this for a friend. All equipment is in Carlisle, MA, and will not be shipped: pickup only. All equipment is in excellent condition, and believed to be working, but is sold AS IS. Make reasonable offer via email to webb@antennasys.com. I do not have detailed information on this equipment, so please do not ask me - it is probably findable on the web.

HP 620A Signal Generator 7-11GHz
HP 626A Signal Generator 10-15GHz
HP 628A Signal Generator 15-21GHz
HP 8551B Spectrum Analyzer with HP 851B display
HP 8820A Low Gain 8-channel Amplifier
Singer 5041 TWT Amplifier 7-12.4GHz
Tektronix TM503 Mainframe
LA501 Logic Analyzer
PG506 Calibration generator
604 Display
Tektronix 602 Rack Mount display
Tektronix 602 display
Tektronix 535, 545 oscilliscopes and plug-ins
Tektronix RM181 Time marker generator
Monsanto 120A Prog. Timer/Counter
GenRad 805C Signal Generator

--
-Spencer Webb webb@antennasys.com
President
AntennaSys, Inc.
www.AntennaSys.com

2909. Re: 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8cibql$15k$1@nnrp1.deja.com>
Source record: 61564
Body handling: HTML body converted to readable text

In article <8ci0av$1tod$1@euler.space.net>,
"Dr. P. Seifert" wrote:
> Hi everybody.
>
> I just purchased a bundle of AD 9854 DDS chips and am looking now for
> the different possibilities to realize a 300 MHz clock with very low
> sideband noise.
> Does anybody have some suggestions / references or experiences which
> could help me with this topic?
>
> 73, Pedro, DF3YB
>
>

Have you already searched at the book "Digital PLL Frequency
Synthesizers - Theory and Design", of Ulrich L. Rhode, DJ2LR/KA2WEU ?
It has many examples of very low sideband noise crystal oscillators.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2910. Re: Engine driven DC Power Supply?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8cicgj$6tt$2@campus3.mtu.edu>
Source record: 61565

JJ OKK <ham_guy@webtv.net> wrote:
> I don't know how you would know when the charging was complete, but there
> must be something at Auto Zone that would check the amount of charge in
> the batteries. That would be a lot safer for the components in your
> transeiver and a lot quieter while you were copying DX. 73 Guy

--> An automotive ammeter, between the batteries and alternator, would be of some help. With the load switched off, if there's current flowing into the batteries, they're being charged. No or very low current, they're basically full. A remote shunt ammeter would allow the meter to be placed in a visible location without adding to the high-current wiring length.

Charge in lead-acid batteries can also be checked with a voltmeter, but that'd require shutting off the alternator (and solar charger) and letting the voltage stabilize, for a really good indication. The voltage sag under the load from the tube rig might be a good indication of state of charge, though.

The third method is to use a specific gravity tester (a few bucks at any auto parts store), but that's probably not very convenient for your purposes.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Eventually, the world will stop turning due to friction from red tape."
-- Marcus D. Watts

2911. Vacuum Variable Wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Chris Scott <Chris.Scott@wku.edu>
Message-ID: <38ECB982.53C7DF0A@wku.edu>
Source record: 61566

I'm starting a matching network project at 160 meters, and am looking for some vacuum variables. If you have one (or some) for sale, please email me with details.

Chris Scott
WB9NEQ

chris.scott@wku.edu

2912. Yaesu Radios For Sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: ferrymaster <stuart@macfreight.co.uk>
Message-ID: <8cihd3$7lp$2@gxsn.com>
Source record: 61567

I have the following 2 amateur radios for sale:

Yaesu FT990AC, internal atu, 500/2.0k/2.4k filters fitted, vgc, sp6 speaker, both boxed, with manuals £800

Yaesu FT726R, 2m/70cm/hf/satellite modules fitted, desk microphone, fairly good condition, boxed with manuals £400

Lack of interest and job, forces reluctant sale.
Must sell....
Any questions, send to:

Stuart - G0GNM
stuart@macfreight.co.uk

2913. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38ECDD87.B275B4BF@agilent.com>
Source record: 61568

Notch for what frequency? How deep a notch do you need? How small an attenuation do you need at certain other freqs? How much power do you need to handle? Passive or active?

Cheers,
Tom

robert leavitt wrote:

> I am looking for instructions for a homebrew notch filter.
> If anyone knows where to find any on the web you can
> e-mail me at: leavittkid@mediaone.net.
>
> Thanks
>
> Drew Leavitt
> AA1UZ

2914. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <Jn6H4.5265$T04.24190@typhoon.ne.mediaone.net>
Source record: 61569

I am just looking for a notch filter that will filter out an interfering signal on CW.

Drew Leavitt
AA1UZ

2915. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: mackys+usenet@dim.com
Message-ID: <8civeh$g44@flatland.dimensional.com>
Source record: 61570

In article <Jn6H4.5265$T04.24190@typhoon.ne.mediaone.net>,
robert leavitt <leavittkid@mediaone.net> wrote:
>I am just looking for a notch filter that will filter out an interfering
>signal on CW.

Tell us what frequency your CW signal is, and maybe we can suggest some
filters. Until then, we're still just shooting in the dark.

-Ben
--
Ben Cantrick (mackys@dim.com) | Yes, the BGC dubs still suck.
BGC Nukem: http://www.dim.com/~mackys/bgcnukem.html
The Spamdogs: http://www.dim.com/~mackys/spamdogs
Better living through denial.

2916. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <DA7H4.5307$T04.24443@typhoon.ne.mediaone.net>
Source record: 61571

Around 21.025 or on as many HF bands as possible.

Thanks

Drew
AA1UZ

2917. Re: FA: HP RF Signal Generator - no reserve-on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: w1ksz@tiac.net
Message-ID: <38ed0de8.1914712@news.tiac.net>
Source record: 61572
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

If you mentioned which one it was, you might generate
more interest !!

73, Dick, W1KSZ

On Wed, 5 Apr 2000 14:39:17 -0700, "Mike" <mike14@west.net> wrote:

>Great Classic Hewlett Packard RF Signal Generator. No Reserve!
>
>See it at:
>http://www.electronbay.com/lot.cfm?lotID=131
>
>
>
>
>

2918. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8cj2qosab1@neptunium.btinternet.com>
Source record: 61573

If you want to make one yourself, a simple notch filter can be placed in the IF amplifier at 9 Mhz or 455 kHz.

It consists of a series-resonant quartz crystal, approximately resonant at the LF end of the IF bandwidth, immediately in parallel with the input to the transistor in the first stage of the IF amplifier. This is usually the 1st gate of a dual-gate FET.

The crystal is placed in series with a tuning capacitance, a capacitance diode about 40 pF. The notch frequency is adjusted by varying the DC diode bias. A potentiometer on the receiver front panel provides the DC control volts.

Switch the filter out of use with a high reverse bias voltage on the diode.

Copy the circuit of a modern Icom receiver or transceiver.
==========
robert leavitt <leavittkid@mediaone.net> wrote in message news:Jn6H4.5265$T04.24190@typhoon.ne.mediaone.net...
> I am just looking for a notch filter that will filter out an interfering
> signal on CW.
>
> Drew Leavitt
> AA1UZ
>
>

2919. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <38ED1A3A.9AEBF5EC@rsg.org>
Source record: 61574

For what sort of application? For RF Power? HF, VHF, UHF?
Receiving only? If so in front end, IF, Audio?

Chuck KD9JQ

robert leavitt wrote:

> I am looking for instructions for a homebrew notch filter.
> If anyone knows where to find any on the web you can
> e-mail me at: leavittkid@mediaone.net.
>
> Thanks
>
> Drew Leavitt
> AA1UZ

2920. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <38ED4298.CDC6C8CC@rsg.org>
Source record: 61575

So what's the URL?

Chuck KD9JQ

J M Noeding wrote:

> On 6 Apr 2000 15:26:41 -0600, mackys+usenet@dim.com (Ben Cantrick)
> wrote:
>
> >In article <Jn6H4.5265$T04.24190@typhoon.ne.mediaone.net>,
> >robert leavitt <leavittkid@mediaone.net> wrote:
> >>I am just looking for a notch filter that will filter out an interfering
> >>signal on CW.
> >
> > Tell us what frequency your CW signal is, and maybe we can suggest some
> >filters. Until then, we're still just shooting in the dark.
> >
> while it seems not to be the requested tool, one might mention that
> DL8ZX has described some xtal notch filters which may work for IF and
> higher frequencies, he describes some applications for solving
> problems with interference from 2m beacon just few hundred kHz from a
> repeater input frequency
>
> 73
> Jan-Martin

2921. Re: 2N3053 Replacement with better power dissipation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Sid Washer <sw10@is4.nyu.edu>
Message-ID: <38ED4551.BC1628D0@is4.nyu.edu>
Source record: 61576
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

<<< The heat generated will be the same but that big transistor can work
with higher temperatures.>>>
Not true. Temp limits the same; bigger package = better thermal
transfer to the heatsink. Temp stays lower allowing greater power
dissipation for same temp. rise. Thermal transfer is the whole trick;
use a heatsink!!! bye, sid

We don' need no steekin' fans!

2922. Re: "energy-sucking antennas": not who I seem?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Nick Kennedy <nkennedy@tcainternet.com>
Message-ID: <seqlh2nnrfg141@corp.supernews.com>
Source record: 61577
Cross-posted to: sci.electronics.design,sci.physics.electromag,rec.radio.amateur.homebrew

Bilge said:

> Gee. For an arbitrarily small resistance... an arbitrarily small
> amount of energy is lost.

No it isn't. Do the math--R cancels out and the energy lost in the
resistance is a constant one half of the initial energy. That's what Roy
and Reg have been trying to tell you.

There's no need for smoke and mirrors and arm waving and quantum corrections
when doing a simple circuits problem. And there's no conflict between
circuit analysis and physics. If you want to make the problem harder, go
ahead. But please abide by conservation of energy. Half is still in the
two capacitors and half heated the resistance--however small.

73,

Nick

Skip the resistor and do it charge by
> charge. same answer. Guess what. If I take the charge and move
> every electrin through a different path through any points in
> the universe, I still get the same answer. Where'd all THAT
> energy go? If moving charges required circcuit analysis and
> resistors, the E-field wouldn't be conservative.
>
>
>
>

2923. Re: XTAL BP-filter ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-06 00:00:00 UTC
From: Ken Linney <ken@g3uda.demon.co.uk>
Message-ID: <955300023.8528.1.nnrp-04.c2deb680@news.demon.co.uk>
Source record: 61578
Cross-posted to: sci.electronics.design,rec.radio.amateur.digital.misc,alt.radio.pirate,rec.radio.amateur.homebrew

Morgan Gunnarsson <di98gumo@chl.chalmers.se> wrote in message
news:38EB1D11.F18F2AB7@chl.chalmers.se...
> Huffy wrote:
> >
> > In article <38E8B83A.BCDA39A5@chl.chalmers.se>, Morgan Gunnarsson
> > <di98gumo@chl.chalmers.se> wrote:
> >
> > > Is it possible to construct a BP-filter by using a XTAL,
> > > where the filter's middle freq. equals the XTAL's resonans freq.?
> > >
> > > Morgan
> >
> > Crystal filters tend to have very narrow bandwidth. If you want a filter
> > for wideband FM, then you'll need something else.
> >
> > --Huffy
>
> I'm going to use it for BPSK demodulation, but maybe it's better to
> cascade
> a LP with a HP (using two op amps, 2x2 resitors and 2x2 capacitors)? The
> problem is that I want to be able to change the received frequency in a
> simple way; can the BP filter be syncronized with the local oscillator?
>
> Morgan

Hello Morgan

Using xtal ladder circuits - it is often easier to produce a narrow CW filter than trying to get the xtals to broadband up to say 3Khz at the 3dB points. For the narrower filter - you do need to have sufficient "Q" in each xtal to begin with.

Best of luck ... Ken

2924. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Keith Diehl <Address@BottomOf.Page>
Message-ID: <lbctesojhg4p9v8rajibe06hd6e78c0b64@4ax.com>
Source record: 61495
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

Here's a PCB website that looks helpful
http://www.hse.gov.uk/pubns/msa9.htm#5

In rec.radio.amateur.homebrew, message <febtes48s0e9lvqev0b56gct439aumoqg2@4ax.com>, Keith Diehl <Address@BottomOf.Page> wrote:

>If the equipment is old, that black gunk may be toxic. Electrolytics used be be filled with PCBs.
>
>Be careful, try and learn more about what it is before proceding.
>
>In rec.radio.amateur.homebrew, message <8cm4l8$dt8$1@slb2.atl.mindspring.net>, dgf@netcom.com (David Feldman) wrote:
>
>>Recovering an old oscilloscope - a primary electrolytic cap in the
>>power supply went "poof" in a big way - altho only 100 uF 20V, it
>>madeq quite a spark now, flame, smoke and mess (blank gunk) on the
>>PC board for an inch or two around the part.
>>
>>Any suggestions on how to clean up the black gunk?
>>
>>The scope works again with a replacement cap so at least I can
>>proceed with debugging, but it sure made a mess!
>>
>>Dave
>>
>>dgf@netcom.com
>
>
>Keith Diehl - Salt Lake City
>spam free email form at http://www.xmission.com\~kdiehl

Keith Diehl - Salt Lake City
spam free email form at http://www.xmission.com\~kdiehl

2925. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Matt Erickson <kk5dr@hotmail.com>
Message-ID: <38EEB177.1536133E@hotmail.com>
Source record: 61496
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

isopropal alcohol 90%, works great.

David Feldman wrote:

> Recovering an old oscilloscope - a primary electrolytic cap in the
> power supply went "poof" in a big way - altho only 100 uF 20V, it
> madeq quite a spark now, flame, smoke and mess (blank gunk) on the
> PC board for an inch or two around the part.
>
> Any suggestions on how to clean up the black gunk?
>
> The scope works again with a replacement cap so at least I can
> proceed with debugging, but it sure made a mess!
>
> Dave
>
> dgf@netcom.com

2926. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38EEC61D.70757396@eznec.com>
Source record: 61497
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

Keith Diehl wrote:
>
> If the equipment is old, that black gunk may be toxic. Electrolytics used be be filled with PCBs.
>
> Be careful, try and learn more about what it is before proceding.
>

Are you sure of that? Oil-filled capacitors were commonly filled with PCB-containing oil, but I didn't think electrolytics ever were. The stuff is definitely caustic, though.

Tektronix used to clean older scopes with detergent and water but that was before the days of IC sockets and surface-mount switches. There's detailed information about washing old scopes in "Oscilloscopes: Selecting and Restoring a Classic" by Stan Griffiths, W7NI. It's self-published, so you can probably get a copy directly from Stan, w7ni@teleport.com.

Roy Lewallen, W7EL

2927. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38ed2c8e.17532619@news.online.no>
Source record: 61579

On Thu, 06 Apr 2000 21:46:11 GMT, "robert leavitt"
<leavittkid@mediaone.net> wrote:

>Around 21.025 or on as many HF bands as possible.
>
>Thanks
>
>Drew
>AA1UZ
>
>
seems what you really need is an audio filter to improve the
selectivity, I have good experience in using the TimeWave DSP-9 with
selectable 100, 200 and 500Hz CW bandwidths.

DSP-9 was available as secondhand at very low price because everybody
seems to be looking for new blackboxes with all sorts of facilities
you never need. W9GR DSP is another similar construction.

Use it with several different receivers including some boatanchors, on
80, 40, 30, 20m and VHF/UHF, might even work for 15m.....

73
Jan-Martin
LA8AK

2928. Re: Notch Filter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38ed2d07.17653072@news.online.no>
Source record: 61580

On 6 Apr 2000 15:26:41 -0600, mackys+usenet@dim.com (Ben Cantrick)
wrote:

>In article <Jn6H4.5265$T04.24190@typhoon.ne.mediaone.net>,
>robert leavitt <leavittkid@mediaone.net> wrote:
>>I am just looking for a notch filter that will filter out an interfering
>>signal on CW.
>
> Tell us what frequency your CW signal is, and maybe we can suggest some
>filters. Until then, we're still just shooting in the dark.
>
while it seems not to be the requested tool, one might mention that
DL8ZX has described some xtal notch filters which may work for IF and
higher frequencies, he describes some applications for solving
problems with interference from 2m beacon just few hundred kHz from a
repeater input frequency

73
Jan-Martin

2929. Re: 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <38ED3858.EDD80DF7@webaxs.net>
Source record: 61581

5th overtone crystal osc for 100MHz, tripler for 300MHz. Two transistors,
crystal, and some tuned circuits.

"Dr. P. Seifert" wrote:
>
> Hi everybody.
>
> I just purchased a bundle of AD 9854 DDS chips and am looking now for
> the different possibilities to realize a 300 MHz clock with very low
> sideband noise.
> Does anybody have some suggestions / references or experiences which
> could help me with this topic?
>
> 73, Pedro, DF3YB

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

2930. Re: 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Alan Matheson <hokianga@ihug.co.nz>
Message-ID: <8cjdqbjov1@news.ihug.co.nz>
Source record: 61582
Body handling: HTML body converted to readable text

There is an excellent article by John Stephensen KD60ZH titled "A Stable
Low Noise Crystal Oscillator for Microwave and Millimeter wave transverters"
in QEX magazine Nov/Dec 1999 issue page 11
This will give you plenty of ideas.
Regards
Alan Matheson ZL2TSQ

wrote in message news:8cibql$15k$1@nnrp1.deja.com...
> In article <8ci0av$1tod$1@euler.space.net>,
> "Dr. P. Seifert" wrote:
> > Hi everybody.
> >
> > I just purchased a bundle of AD 9854 DDS chips and am looking now for
> > the different possibilities to realize a 300 MHz clock with very low
> > sideband noise.
> > Does anybody have some suggestions / references or experiences which
> > could help me with this topic?
> >
> > 73, Pedro, DF3YB
> >
> >
>
> Have you already searched at the book "Digital PLL Frequency
> Synthesizers - Theory and Design", of Ulrich L. Rhode, DJ2LR/KA2WEU ?
> It has many examples of very low sideband noise crystal oscillators.
> --
> Greetings,
>
> Luiz - PY1LL
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

2931. Re: 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8ckk6mesg1@nnrp1.deja.com>
Source record: 61583
Body handling: HTML body converted to readable text

In article <8ci0av$1tod$1@euler.space.net>,
"Dr. P. Seifert" wrote:
> Hi everybody.
>
> I just purchased a bundle of AD 9854 DDS chips and am looking now for
> the different possibilities to realize a 300 MHz clock with very low
> sideband noise.
> Does anybody have some suggestions / references or experiences which
> could help me with this topic?

The AD9852 has a built-in PLL multiplier(4X to 20X) for the 300 MHz
clock. Perhaps you could swap your AD9854s. 8-)

ADI has an app. note. for the AD9850 with details of a 150 MHz clock
circuit. You could put the output into a doubler.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

2932. Wtd Circuit for 2x 4-1000 Grid Driven, Thanks

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Rick <ricky@CABOOLTURE.NET.AU>
Message-ID: <8cju83hfo1@news.interpacket.net>
Source record: 61584

Hello,

I am after a circuit for a pair of grid driven 4-1000's.

Thanks

Rick

2933. FS: 12A6 RCA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: arnoldg@sf.telia.no
Message-ID: <38edfbe0.708795@news.telia.no>
Source record: 61585
Cross-posted to: rec.antiques.radio+phono,rec.audio.tubes,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,

I have about 130 pcs 12A6 valves for sale. The are unused (NOS) and in original boxes. I sell them for US$ 2.50 each if you by 50 pcs or more.

Regards,

Arnold Goksoyr

DEMOSTENES - N6899 Balestrand, Norway
Tlf. +47 5769 1340 Fax +47 5769 1267
http://demostenes.vestdata.no

Valves, sockets, transformers, books and components
Good stock on all types. We ship worldwide.

2934. Re: Help with info on Avantek parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: dunnt@its.caltech.edu
Message-ID: <dunnt-0704000853570001@dhcp-40-187.caltech.edu>
Source record: 61586

In article <38eccd26@news.isdn.net>, "Mark Mansfield" <mmans@aeneas.net> wrote:

>I have some Avantek parts:
>UTO-545, UTO-512, UTO-523
>also some filters by Wavetek (I believe that's what they are)
>B2B6PP 450/40,
>B2P5PP 50/5,
>B2B4PP 400/40
>
>I'm specifically looking for info on these parts, anyone have
>any suggestions where I might find the specs for them?
>
>Thanks!
>Mark

UTO-545 10-500Mhz, 15db, gain, 2db NF, 1db compression point -3dbm, +7 dbm
IM product intercept point, +15 vdc

UTO-512 5-500Mhz, 20db, gain, 4.5db NF, 1db compression point +7dbm, +20
dbm IM product intercept point, +15 vdc

UTO-523 5-500Mhz, 23db, gain, 7db NF, 1db compression point +12dbm, +25
dbm IM product intercept point, +15 vdc

From 1977 Aventek Microwave Solid State Products Catalog.

Wavetec type LC filters

Model B2, #of section, center freq, band pass, average power

6 450 mhz 40 10 watts
5 50 5 10
4 400 40 10

The other letters have to do with connectors I believe. This was taken
from 1981/1982 Wavetec catalog. The information is rather sketchy but this
is all I have.

Tom WB6IQD

2935. Re: Homebrew antenna switch - what components to use.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Abe Schachter <aschach3@csc.com>
Message-ID: <38EDF8E6.DB06331A@csc.com>
Source record: 61587

I have a similar project where I want to switch coax between two antennas in the car (a 2m/440 vertical for 2m FM and a loop for 2m SSB with 50W max). My design goal is to use a relay so that I can have a BASIC Stamp read the band/mode data from the rig and trip the relay as appropriate. Any suggestions for relay types and what the dB loss in the relay might be? I'm not doing any 440 SSB from the car so the relay would always connect to the vertical for UHF.

Abe N3BBF

Bob wrote:

> You would do best with a ceramic insulated rotary switch. The ceramic is
> low loss and has a high dielectric strength. Low capacitance across
> contacts. Get one with substantial contacts, as you will be carrying
> considerable current.
>
> And of course, never hot switch an antenna switch or you may damage the
> switch and your transmitter.
>
> 73, Bob K6DDX

2936. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Patrick Olson <olpa9901@stcloudstate.edu>
Message-ID: <38EE0F9B.35299DAA@stcloudstate.edu>
Source record: 61588

>
>
> I know you tend to get a bit casual in the US with your 117volt outlets, but
> please don't even think about doing it according to your suggestions!
>

I've got plenty of plans to step - up the current :)
nothing a GZ37 can't handle...

--
73's from,

Patrick Olson N0VFG
St. Cloud State University
www.stcloudstate.edu/~aviation

2937. Re: Homebrew antenna switch - what components to use.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8cl5lo$117e$1@ausnews.austin.ibm.com>
Source record: 61589

In <38EDF8E6.DB06331A@csc.com>, Abe Schachter <aschach3@csc.com> writes:
>I have a similar project where I want to switch coax between two antennas in
>the car (a 2m/440 vertical for 2m FM and a loop for 2m SSB with 50W max). My
>design goal is to use a relay so that I can have a BASIC Stamp read the
>band/mode data from the rig and trip the relay as appropriate. Any
>suggestions for relay types and what the dB loss in the relay might be? I'm
>not doing any 440 SSB from the car so the relay would always connect to the
>vertical for UHF.
>
>Abe N3BBF

You may want to investigate using a Dowkey relay. These have a
reputation for high reliability, low loss, low cross-talk, and are
specifically designed for VHF/UHF RF and microwave applications.
Plus, their web-site offers excellent technical information. But,
be warned that they aren't cheap. The web-site is:

http://www.dowkey.com

It may be possible to use another relay. But, the problem will be
that, unless the relay you choose is designed for UHF applications,
it may have an unacceptably high insertion loss, or may result in a
high SWR condition. It doesn't take much inductance or capacitance
to really mess things up on the 440MHz band.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for
them.

2938. Re: 300 MHz DDS Reference

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Lasse Moell <lasse.moell@swipnet.se>
Message-ID: <ko9sesotv6kcf2vv4ikf8knvc1725a4krk@4ax.com>
Source record: 61590
Body handling: HTML body converted to readable text

I am currently in the desing phase of a low noise xtal oscillator at
60 MHz. I will try a MMIC and use anti parallell diodes for limiting.
This has been tested in VHF Comm magazine and produced stunning
results. It is very easy to simulate in a linear simulator as it uses
50 ohm termination. I was truly amazed of the published performance.
If I succede with the design I will let you know!!!

Cheers
Lasse SM5GLC

On Fri, 07 Apr 2000 12:27:13 GMT, Leon Heller
wrote:

>In article <8ci0av$1tod$1@euler.space.net>,
> "Dr. P. Seifert" wrote:
>> Hi everybody.
>>
>> I just purchased a bundle of AD 9854 DDS chips and am looking now for
>> the different possibilities to realize a 300 MHz clock with very low
>> sideband noise.
>> Does anybody have some suggestions / references or experiences which
>> could help me with this topic?
>
>The AD9852 has a built-in PLL multiplier(4X to 20X) for the 300 MHz
>clock. Perhaps you could swap your AD9854s. 8-)
>
>ADI has an app. note. for the AD9850 with details of a 150 MHz clock
>circuit. You could put the output into a doubler.
>
>
>Leon

2939. .2Mhz notch filter for FM Broadcast band

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: aardvarkiq@nac.net
Message-ID: <38EE579F.FBEDBC6D@nac.net>
Source record: 61591

I recently purchased a 6 element beam for fm broadcast, it works great but the stereo seems to receiving interference from an adjacent frequency. Could someone please post or direct me someplace that has directions to build a notch filter?

Thanks,
John

2940. FS: 220 MHz linear power modules type M67712 30 W out for 300mW in

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Bryan Fields <kb9mci@urbancom.net>
Message-ID: <38EE6218.CD06CAFA@urbancom.net>
Source record: 61592
Cross-posted to:
rec.radio.swap,rec.radio.amateur,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I have 2 of the type M67712 class AB 30 Watts out average, 40 Watts max. The input drive is 300 mW. I am asking $ 60.00 each for them. RF parts wants around $80.00 for the same.

These are brand new never been used and still have the one inch leads on them.

Thank You,

Bryan Fields, KB9MCI

kb9mci@qsl.net

Phone: (708) 862-3485

--
=-=
"If there be time to expose through discussion the falsehood and the fallacies, to avert the evil by processes of education, the remedy to be applied is more speech, not enforced silence."
-- U.S. Supreme Court Justice Louis Brandeis, 1927

"Necessity is the plea for every infringement of human freedom. It is the argument of tyrants; it is the creed of slaves."
--William Pitt, 1783

And just 'cus I am a Pyro,

"Nonflammable is not a challenge"
--Bart Simpson

Bryan Fields, KB9MCI

2941. Re: .2Mhz notch filter for FM Broadcast band

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38EE6F9C.DA39F966@agilent.com>
Source record: 61593

You might be better off turning the beam to null the strong adjacent frequency signal than to try to notch it. That's asking quite a lot of a filter. Notching 101.7 by 40dB relative to 101.5 looks to me like it would take a single coaxial resonator about 6" diameter. Multiple resonators could do better, but in any event that spacing is half the percentage that repeaters on 2 meters usually use. -- Or, get a receiver with very good adjacent channel performance. (Is it really adjacent [+/- 0.2MHz] or alternate [+/- 0.4MHz] channel?) Also, AFAIK FM broadcast stations do nothing special to attenuate their out-of-band sidebands beyond what just comes out of proper FM modulation, so a local station may ligitimately have significant energy in the adjacent channel. Again, a directional notch will be much more effective than a spectral notch in that case.

Cheers,
Tom

aardvarkiq@nac.net wrote:

> I recently purchased a 6 element beam for fm broadcast, it works great
> but the stereo seems to receiving interference from an adjacent
> frequency. Could someone please post or direct me someplace that has
> directions to build a notch filter?
>
> Thanks,
> John

2942. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-07 00:00:00 UTC
From: Keith Diehl <Address@BottomOf.Page>
Message-ID: <febtes48s0e9lvqev0b56gct439aumoqg2@4ax.com>
Source record: 61594
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

If the equipment is old, that black gunk may be toxic. Electrolytics used be be filled with PCBs.

Be careful, try and learn more about what it is before proceding.

In rec.radio.amateur.homebrew, message <8cm4l8$dt8$1@slb2.atl.mindspring.net>, dgf@netcom.com (David Feldman) wrote:

>Recovering an old oscilloscope - a primary electrolytic cap in the
>power supply went "poof" in a big way - altho only 100 uF 20V, it
>madeq quite a spark now, flame, smoke and mess (blank gunk) on the
>PC board for an inch or two around the part.
>
>Any suggestions on how to clean up the black gunk?
>
>The scope works again with a replacement cap so at least I can
>proceed with debugging, but it sure made a mess!
>
>Dave
>
>dgf@netcom.com

Keith Diehl - Salt Lake City
spam free email form at http://www.xmission.com\~kdiehl

2943. Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: dgf@netcom.com
Message-ID: <8cm4l8$dt8$1@slb2.atl.mindspring.net>
Source record: 61498
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

Recovering an old oscilloscope - a primary electrolytic cap in the power supply went "poof" in a big way - altho only 100 uF 20V, it madeq quite a spark now, flame, smoke and mess (blank gunk) on the PC board for an inch or two around the part.

Any suggestions on how to clean up the black gunk?

The scope works again with a replacement cap so at least I can proceed with debugging, but it sure made a mess!

Dave

dgf@netcom.com

2944. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: dgf@netcom.com
Message-ID: <8cmjm2$23j$1@slb6.atl.mindspring.net>
Source record: 61499

In article <38EEC61D.70757396@eznec.com>, Roy Lewallen <w7el@eznec.com> wrote:
>Keith Diehl wrote:
>>
>> If the equipment is old, that black gunk may be toxic. Electrolytics used be be filled with PCBs.
>>
>> Be careful, try and learn more about what it is before proceding.
>>
>
>Are you sure of that? Oil-filled capacitors were commonly filled with
>PCB-containing oil, but I didn't think electrolytics ever were. The
>stuff is definitely caustic, though.
>

I didn't clarify - the black stuff was caused by FLAMES that emitted from the failed cap. It was small - 100 uF 20V - in a Tek 214 scope - (mid 1980s era at the earlist). I replaced the cap and the scope continues to work - I just think the carbon (black) stuff should be removed as there are probably impedance paths that should not be there now. Fortunately the trouble was in a low-voltage area (just the main "bypass" cap in the DC/DC inverter).

Of the various suggestions here I think the isopropyl alcohol cleaning sounds most useful.

Dave

2945. Re: .2Mhz notch filter for FM Broadcast band

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38eef097.133271427@news.online.no>
Source record: 61500

it is a trick stacking two yagies where one is moved forwards or
backwards to null the unwanted signal

73
jan-martin
LA8AK

On Fri, 07 Apr 2000 16:30:36 -0700, Tom Bruhns
<tom_bruhns@agilent.com> wrote:

>You might be better off turning the beam to null the strong adjacent
>frequency signal than to try to notch it. That's asking quite a lot of a
>filter. Notching 101.7 by 40dB relative to 101.5 looks to me like it would
>take a single coaxial resonator about 6" diameter. Multiple resonators
>could do better, but in any event that spacing is half the percentage that
>repeaters on 2 meters usually use. -- Or, get a receiver with very good
>adjacent channel performance. (Is it really adjacent [+/- 0.2MHz] or
>alternate [+/- 0.4MHz] channel?) Also, AFAIK FM broadcast stations do
>nothing special to attenuate their out-of-band sidebands beyond what just
>comes out of proper FM modulation, so a local station may ligitimately
>have significant energy in the adjacent channel. Again, a directional
>notch will be much more effective than a spectral notch in that case.
>
>Cheers,
>Tom
>
>
>aardvarkiq@nac.net wrote:
>
>> I recently purchased a 6 element beam for fm broadcast, it works great
>> but the stereo seems to receiving interference from an adjacent
>> frequency. Could someone please post or direct me someplace that has
>> directions to build a notch filter?
>>
>> Thanks,
>> John
>

2946. Re: 2N3053 Replacement with better power dissipation.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8cnati$b9g$1@nnrp1.deja.com>
Source record: 61501
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

In article <38ED4551.BC1628D0@is4.nyu.edu>,
sw10@is4.nyu.edu wrote:
> <<< The heat generated will be the same but that big transistor can
work
> with higher temperatures.>>>
> Not true. Temp limits the same; bigger package = better thermal
> transfer to the heatsink. Temp stays lower allowing greater power
> dissipation for same temp. rise. Thermal transfer is the whole trick;
> use a heatsink!!! bye, sid
>
> We don' need no steekin' fans!
>

You are right but when talking about internal (junction) temperatures.
I'm talking about external (case) temperatures. Higher power transistors
normally have better heat junction-to-case transfer; so, for the same
junction temperature, more heat is transferred to the case. As this is a
better radiator than a smaller transistor, the overall system will
withstand a higher output power.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

2947. WTD-Amp circuit for grid driven 4-400's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: "D. Nicolson" <nicolson@erols.com>
Message-ID: <38EF1789.2A6FEFA7@erols.com>
Source record: 61502

Anybody got a good stable circuit for a pair of 4-400's ? Found plenty of cathode amps, but no grid driven ones.

thanks

Don

2948. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <38EF0C34.636BB142@dialpoint.net>
Source record: 61503

If the capacitor did have some PCBs in it , there would not be enough
there to harm anyone unless he might lick it off the board. PCBs are
not harmful to the skin in small ammounts. They are only toxic when
they get into the food chain.
For some reason many think that the PCBs are like a deadly poison.

Keith Diehl wrote:
>
> If the equipment is old, that black gunk may be toxic. Electrolytics used be be filled
with PCBs.
>
> Be careful, try and learn more about what it is before proceding.
>
>

2949. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: "VA2PTC, Eric" <eric.bouchard4@sympatico.ca>
Message-ID: <xkFH4.10296$2D6.174511@news20.bellglobal.com>
Source record: 61504
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

PCB is not toxic, gases from it's combustion is very hazardous. PCB is a very stable product and it's take hundred's of year to decompose (PCB was used in lipstick to give colour hold).

To clean carbon deposit and gunk, i use car break cleaner it's 1.1.1. or "freon gas". Not very eart frendly but it's work. Same product is used to clean pro insulation injection device. Acetone give also good result.

I have once clean soft drink spill in keyboard and jet ink overfill in a
printer by ... trow it in dishwash bath, clean water rinse and let's dry.
It is a flip coin gest, it may work but... i have noting to lose.
--
Eric, VA2PTC
Jonqui&#65533;re, Qu&#65533;bec
JUNKeric.bouchard7@sympatico.ca
(418) 695-4619 t&#65533;l et fax
Pour m'&#65533;crire:
retirez le mot JUNK de mon adresse e-mail

2950. IC 706 tune control?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Sandy <n9pgo@mediaone.net>
Message-ID: <38EF40B9.F97C9E09@mediaone.net>
Source record: 61505

Any info on the 706 tune control widget that plugs in to the Molex
connector of the 706?
(the little circuit that makes the tuner/call button work without the
auto tuner).
Would like to make my own...but with no 706 or tuner schematic, haven't
a clue.

73 es gud dx
Sandy - n9pgo

2951. Re: IC 706 tune control?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: chipster66@hotmail.com
Message-ID: <38f04497.8554679@news.usol.com>
Source record: 61506

On Sat, 08 Apr 2000 09:22:49 -0500, Sandy <n9pgo@mediaone.net> wrote:

>Any info on the 706 tune control widget that plugs in to the Molex
>connector of the 706?
>(the little circuit that makes the tuner/call button work without the
>auto tuner).
>Would like to make my own...but with no 706 or tuner schematic, haven't
>a clue.
>

Try this URL:

http://www.qsl.net/wb8rcr/706Tune.html

Chip ...

>73 es gud dx
>Sandy - n9pgo
>
>

2952. I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: ve6xtc@ecn.ab.ca
Message-ID: <38ef45c6@ecn.ab.ca>
Source record: 61507

I sure wish I had good sight. There are so many projects which
I'd absolutely love to build but my sight is extremely poor. I often save
old parts and hope that I can find a friend to build stuff for me. It's
hard to do since far too few hams build stuff. If I had 20/20 sight, my
soldering iron would never be cold. If you can, please volunteer to help
white caners build cheap and effective home brew equipment.
Yours,

Bruce Atchison, electronic musician, freelance writer, and rabbit fanatic.
ve6xtc@freenet.edmonton.ab.ca

2953. F.A. METERS & ELECTRONIC PARTS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Max <codtrap@usa.net>
Message-ID: <38EEC247.DD80A34E@usa.net>
Source record: 61508

Last days.
http://cgi6.ebay.com/aw-cgi/eBayISAPI.dll?ViewListedItems&userid=newfoundlander&include=0&since=-1&sort=2&rows=25

Thank you

2954. Re: IC 706 tune control?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Larry Gauthier <larryg_AT_ismi.net>
Message-ID: <38ef7bfd@news.ismi.net>
Source record: 61509

I own an IC-746, which also has a useless "tune" control on the front panel
and a very similar-looking 4 pin molex connector on the back.

Does anyone know if this circuit will also place the 746 in a low-power tune
mode for 10 seconds? This would be great for both antenna tuner and amp
tuning.

-larry
K8UT (formerly wb8bgo)

"Chip" <chipster66@hotmail.com> wrote in message
news:38f04497.8554679@news.usol.com...
> On Sat, 08 Apr 2000 09:22:49 -0500, Sandy <n9pgo@mediaone.net> wrote:
>
> >Any info on the 706 tune control widget that plugs in to the Molex
> >connector of the 706?
> >(the little circuit that makes the tuner/call button work without the
> >auto tuner).
> >Would like to make my own...but with no 706 or tuner schematic, haven't
> >a clue.
> >
>
> Try this URL:
>
> http://www.qsl.net/wb8rcr/706Tune.html
>
> Chip ...
>
>
> >73 es gud dx
> >Sandy - n9pgo
> >
> >
>

2955. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38EF8E9C.9F843F0B@eznec.com>
Source record: 61510
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

Freon won't hurt most plastics, but acetone attacks lots of them. I wouldn't use acetone, MEK, or similar solvents if I were you. Isopropyl alcohol should be fine. Or if you're not cleaning too large an area and need a little stronger solvent, naphtha might work and it won't harm most plastics. But be careful using it -- it's obviously very flammable, since it's sold as Coleman fuel and cigarette lighter fluid.

Roy Lewallen, W7EL

"VA2PTC, Eric" wrote:
>
> PCB is not toxic, gases from it's combustion is very hazardous. PCB is a
> very stable product and it's take hundred's of year to decompose (PCB was
> used in lipstick to give colour hold).
>
> To clean carbon deposit and gunk, i use car break cleaner it's 1.1.1. or
> "freon gas". Not very eart frendly but it's work. Same product is used to
> clean pro insulation injection device. Acetone give also good result.
>
> I have once clean soft drink spill in keyboard and jet ink overfill in a
> printer by ... trow it in dishwash bath, clean water rinse and let's dry.
> It is a flip coin gest, it may work but... i have noting to lose.
> --
> Eric, VA2PTC
> Jonquiï¿½re, Quï¿½bec
> JUNKeric.bouchard7@sympatico.ca
> (418) 695-4619 tï¿½l et fax
> Pour m'ï¿½crire:
> retirez le mot JUNK de mon adresse e-mail

2956. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <kpatesos4b0g3sm1hjku8e20berelbelfc@4ax.com>
Source record: 61511
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

dgf@netcom.com (David Feldman) wrote:

>Any suggestions on how to clean up the black gunk?

My first suggestion would be water and a toothbrush. This will do it if it is just electrolyte. If it is carbon there is no suitable solvent so you'll just have to let it dry and try to brush it off.

If you use water, follow up with an alcohol rinse, and be careful of what you get wet. Keep water out of transformers and pots, and anywhere else it could sit and cause corrosion instead of drying quickly.

Make SURE it is dry before powering up again.
-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

2957. new QRP MFJ 2W Cub Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: rsylvan662@aol.com
Message-ID: <20000408173118.15265.00000412@ng-cn1.aol.com>
Source record: 61512

Has anyone used the new MFJ 2W Cub Xcvr. Have you had good results with it? I would like to buy one, but its not easily available yet

Thanks

Dick W9CBT
email RSylvan662@aol.com

2958. Re: WTD-Amp circuit for grid driven 4-400's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Woody White <woody.white@att.net>
Message-ID: <38EFAEE6.C7BF5006@att.net>
Source record: 61513

While no "how to", you might get some ideas from my amp
project. Was quite a while back, before computer graphics,
and evolved some. Expect a "chicken scratch" schematic on
this one... Not like my other schematics which are
relatively nice and accurate! Anyway, if you are interested,
go to my web page (below) and click the homebrew
image/link. Find the 4-400 amp and left click where it says
to view - right click it to save...
73,
Woody

"D. Nicolson" wrote:
>
> Anybody got a good stable circuit for a pair of 4-400's ? Found plenty
> of cathode amps, but no grid driven ones.
>
> thanks
>
> Don

NEW web site format!.....NEW site
address!

Ham Homebrew/ATV Circuits...Scanning Electron Microscope
Images

http://woody.white.home.att.net ...de Woody,
WB4QXE

2959. Re: .2Mhz notch filter for FM Broadcast band

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <_HQH4.295$Vk1.12553@news.inreach.com>
Source record: 61514

John:

A good place to start, if you are willing to experiment is:
http://www.ifwtech.demon.co.uk/g3sek/swxfiltr/swxfiltr.htm

Roger
<aardvarkiq@nac.net> wrote in message news:38EE579F.FBEDBC6D@nac.net...
> I recently purchased a 6 element beam for fm broadcast, it works great
> but the stereo seems to receiving interference from an adjacent
> frequency. Could someone please post or direct me someplace that has
> directions to build a notch filter?
>
> Thanks,
> John
>

2960. FA: Old Electronics Catalogs on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <hbSH4.136$U3.10812@newsfeed.avtel.net>
Source record: 61515
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap

```
See them all at: http://www.electronbay.com

--
Electron Bay
The All Radio & Electronics Auction
http://www.electronbay.com
```

2961. Help! Data Needed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: gbowne <gbowne@email.msn.com>
Message-ID: <OHHcvdco$GA.321@cpmsnbbsa04>
Source record: 61516

Dear All list members,

Can anyone help me locate the companies listed in the 30th Edition of the ARRL Radio Amateurs Handbook published in 1953? I would like their Last Known Addresses, Current Address, Phone Numbers, website addresses, subsidierys, etc. and any other useful information. Please submit any information you can provide to
gbowne@email.msn.com

The companies (as listed in the 1953 index) are:

Advance Electric & Relay Co.
Allied Radio Corp.
American Lava Corp.
American Phenolic Corp.
American Radio Relay League
American Television & Radio Co.
Amperex Electronic Corp.
Ashe Radio Co.
Barker and Williamson, Inc.
Belden Manufacturing
Bliley Electric Co.
Bud Radio, Inc.
Burstein-Applebee Co.
Cameradio Co., Inc.
Candler System Co.
Cannon Electric Co.
Centralab
Collins Radio Co.
Concord Radio
Cornell-Dubilier Electric Corp.
Dale Electronics Distributors
Eitel-McCullough, Inc.
Eldico of New York, Inc.
Electric Soldering Iron Co., Inc.
Electronic Instrument Co., Inc.
Electrons, Inc.
Electro-Voice, Inc.
Erie Resistor Corp.
Federated Purchaser, Inc.
Fort Orange Radio Distributing Co.
Freed Transformer Co.
Gates Radio Co.
General Electric Co.
Hallicrafters Co., The

Hammarlund Mfg. Co., The
Harrison Radio Corp.
Harvey Radio Co.
Harvey-Wells Electronics, Inc.
Heath Co., The
Henry Radio Stores
Hudson Radio & Television Corp.
Hughes Research & Development Labs
Illinois Condenser Co.
Instructograph Co.
Insuline Corporation of America
International Rectifier Corp.
International Resistence Co.
Johnson Co, E.F.
Kenyon Transformer Co., Inc.
Kieruff Electronics, Inc.
Knights Company, The James
LaPointe-Plascomold corp.
Macmillan Co., The
Mallory & Co., Inc., P.R.
Master Mobile Mounts, Inc.
McElroy Manufacturing Co.
Measurments Corp.
Merit Transformer Corp.
Midland Manufacturing Co., Inc.
Millen Manufacturing Co, Inc., The James
National Co., Inc.
Newark Electric Co.
Ohmite Manufacturing Co.
Par -Metal Products Corp.
Precise Measurments Co.
Precision Apparatus Co. Inc.
Radio Corporation of America
Radio Products Sales, Inc.
Radio Shack Corp.
Shure Brothers, Inc.
Shurite Meters
Sprague Products Co.
Standard Transformer Corp.
Superior Instruments Co.
Supreme, Inc.
Terminal Radio Corp.
Times Facsimile Corp.
Triplett Electrical Instrument Co.
Turner Co., The
United Electronics Co.
United Transformer Co.
Valpey Crystal Corp.
Vibroplex Co., The
Waterman Products Co., Inc.

Wile, Eugene G.
Wincharger Corp.
World Radio Laboratories, Inc.

Thanks,
Gregory Bowne
gbowne@email.msn.com
KB7IIF
Washington State ARA at its best!

2962. FA: HP 606A RF Signal Generator on Electron Bay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-08 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <iNSH4.138$U3.10704@newsfeed.avtel.net>
Source record: 61517
Cross-posted to:
misc.industry.electronics.marketplace,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

see it at: http://www.electronbay.com/lot.cfm?lotID=131

2963. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000408201307.18638.00001152@ng-cg1.aol.com>
Source record: 61518

Use alcohol and a toothbrush.If this does not work use alcohol and a brass brush(looks like a tooth brush). What this wil lnot take off probably will not matter. After the cleaning brush on a little lacquer.

2964. trade kenwood mobile

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: hcrane@thezone.net
Message-ID: <38efd8b3.111782780@news.thezone.net>
Source record: 61519

would like to trade a kendwood 2mter mobile for a handheld with speaker mic this radio is only 2 months old i have receipt if you like to see copy and also pic of radio if intrested in trade please email. thanks.

2965. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: maddog@io.com
Message-ID: <38efff0d.638869190@news.io.com>
Source record: 61520

On Sun, 02 Apr 2000 04:14:06 -0700, W2EB
<n2tpaNOn2SPAM@juno.com.invalid> wrote:

>Ken,
>
> Now the tough part. What constitutes a separate building,
>and what constitutes a "small outbuilding"? I read the NEC.
>Clear as mud describes it very well.
>

You can make case with the NEC all day and it almost always comes down to this in real practice:

1. If you are using a licensed electrical contractor, what is their master electrician's interpretation of what's required?... by the way, much of her/his interpretation will be based on (2):

2. How does the local code inspector interpret the installation, and the NEC? This varies very widely from locality to locality, and even inspector to inspector, in a large metropolitan area. Whether the interpretation is right or wrong, she/he's the one who has to sign it off. Once signed, it's "code". Fighting their interpretation (right or wrong) usually only alienates them, unless you're a really politik. If you can find out who your inspector is, and they are willing to answer a query before the job is done (not always the case), then you will know which way to go. Often you just have to do it the best you can, and be prepared to rework when the inspection takes place. This is a fact of life in the electrical construction industry, and one that often causes much consternation for contractors (especially when just starting their business).

73 and good luck,
monty N5FC

2966. Re: FAST PCB prototypes for $26

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: maddog@io.com
Message-ID: <38f0078a.641042348@news.io.com>
Source record: 61521

On Sat, 01 Apr 2000 20:24:17 GMT, tusunov@my-deja.com wrote:

>check http://run.to/pcb
>FR-4 - 1.6mm, 160x100mm (6,3x3,9") for only 26,00 USD
>Double side, PTH, Solder mask, Component mark
>Shipment in 3-5 working days !

These are very good prices, the shipping costs to the USA may offset
the cost advantage somewhat.

I wonder if anyone stateside who has used these folks has any comments
on their experience with them?

73,
monty N5FC

2967. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <38F01077.DC4B26D0@webaxs.net>
Source record: 61522
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

Don't *ever* use it on clear plastics, front-panels, etc.

Also, try spray-on 'electronics wash'.

'Nifty' spray from supermarkets works great, especially
removing smoke/tar/grease, etc.

Matt Erickson wrote:
>
> isopropal alcohol 90%, works great.
>

--

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *

2968. HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: W5IDX <W5IDX@worldnet.att.net>
Message-ID: <J8XH4.10563$ei.378487@bgtnsc04-news.ops.worldnet.att.net>
Source record: 61523
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
572B
The Original Caps Are 100uf. (500 Volt) 8 In Quantity

1: If I Used 450uf What Would Happen. ?
2: What Do You Suggest. ?
3: Would Quality Of The Output Be Degraded ?

Thank You W5IDX
W5IDX@ qsl.net

2969. Address for Ramsey Electronics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: renfredm@bigfoot.com
Message-ID: <38f045c4.782022@news.xtra.co.nz>
Source record: 61524

Hi peoples,
can somebody give me the email address for Ramsey
Electronics in NY who provide some of the kits used in the ARRL
handbook?
Thanks, Renfred ZL1BDL

2970. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: rexa*non*spam*@nspam.dnai.com
Message-ID: <cbi0fsk4j03kq357m61h6onmon70p6n6bn@4ax.com>
Source record: 61525

The best thing I've found for cleaning old equipment is auto bug and tar remover. I've used it lots of times for removing labels and glue residue from front panels. Its strong enough to soften the glue and remove dirt and even some pen marks. I've never had any problem with it damaging any paint or plastics.

Not sure about using it around switch or socket contacts though. I think I'd go with the alcohol for that.

-Rex, KK6MK

On Sat, 08 Apr 2000 12:55:08 -0700, Roy Lewallen <w7el@eznec.com> wrote:

>Freon won't hurt most plastics, but acetone attacks lots of them. I
>wouldn't use acetone, MEK, or similar solvents if I were you. Isopropyl
>alcohol should be fine. Or if you're not cleaning too large an area and
>need a little stronger solvent, naphtha might work and it won't harm
>most plastics. But be careful using it -- it's obviously very flammable,
>since it's sold as Coleman fuel and cigarette lighter fluid.
>
>Roy Lewallen, W7EL
>

2971. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: gudguyham@aol.com
Message-ID: <20000409071309.15255.00000273@ng-co1.aol.com>
Source record: 61526

Very true what you say!! I agree...My local inspector interperts a separate building as any building that is not connected to the main building in any way, if there was a connection such as a roof line or breezeway its considered the same building and therefore any electrical panel in the out building would be considered a "sub panel" and therefore the codes concerning "sub panels" would apply. So if the building is not connected in any way then the panel in the "separate" building would be wired like a "main panel" of the main building, however, the separate building panel may be fed by the main panel from the main house. The main difference between a sub panel and a main panel is the nuetral/ground configuration. On a sub panel all nuetrals and grounds must be separate and no separate ground rod. In the case of a panel in a separate building, the nuetral and ground WILL come together and a separate ground rod for that building is required. So it would be treated as a separate service (so to speak) even though it is fed from the main building.
I have found that on most occassions if you ask the local building inspector what HE wants to see when he inspects the job, he will TELL you. It will save you alot of grief afterwards. You may be right and he may be wrong, but the only way to solve the problem would be to appeal to the STATE electrical inspector for a mediation, that could take time,so better off to make a call to your local inspector and discuss the job before hand. In most cases they will answer your question AND alot of times, in GREAT detail, especailly if its the first time you are working in his juristiction......Cheers......Louie

2972. Re: I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38F05B25.4CEF8AE7@cmcorp.com>
Source record: 61527

ve6xtc@ecn.ab.ca wrote:

> I sure wish I had good sight. There are so many projects which
> I'd absolutely love to build but my sight is extremely poor. I often save
> old parts and hope that I can find a friend to build stuff for me. It's
> hard to do since far too few hams build stuff. If I had 20/20 sight, my
> soldering iron would never be cold. If you can, please volunteer to help
> white caners build cheap and effective home brew equipment.
> Yours,
>
> Bruce Atchison, electronic musician, freelance writer, and rabbit fanatic.
> ve6xtc@freenet.edmonton.ab.ca

I envy your attitude!
I'm a consummate builder at home and at work.

If I could only FIND folks, blind or otherwise, that had that thirst for
building.

I hold Ham Radio night every monday night at my house to help folks learn
and build "Stuff" and the numbers of interested folks are dropping off.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

2973. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38F05BBC.B88DF292@cmcorp.com>
Source record: 61528
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

W5IDX wrote:

> I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
> 572B
> The Original Caps Are 100uf. (500 Volt) 8 In Quantity
>
> 1: If I Used 450uf What Would Happen. ?

Increased ripple current, DECREASED Ripple voltage, perhaps increased average voltage.

> 2: What Do You Suggest. ?

GO for it! (Maybe add current limit resistance?)

> 3: Would Quality Of The Output Be Degraded ?

I doubt it. The times I've done it, the output was MORE stable.

> Thank You W5IDX
> W5IDX@ qsl.net

73

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

2974. Re: Mess from destroyed electrolytic - cleaning?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Rich Grise <off-duty@entheosengineering.com>
Message-ID: <38F05B3E.4E520891@entheosengineering.com>
Source record: 61529
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.misc

I vote soapy water & toothbrush, then clear water rinse, but be
sure to dry it thoroughly before powering up.

Isopropyl probably wouldn't do any harm, and would probably
dry faster.

Good luck!
Rich

David Feldman wrote:
>
> Recovering an old oscilloscope - a primary electrolytic cap in the
> power supply went "poof" in a big way - altho only 100 uF 20V, it
> madeq quite a spark now, flame, smoke and mess (blank gunk) on the
> PC board for an inch or two around the part.
>
> Any suggestions on how to clean up the black gunk?
>
> The scope works again with a replacement cap so at least I can
> proceed with debugging, but it sure made a mess!
>
> Dave
>
> dgf@netcom.com

2975. Help! schematic for Swan Mark I linear

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: gudguyham@aol.com
Message-ID: <20000409110027.27075.00000766@ng-fd1.aol.com>
Source record: 61530

Hi fellas, I need a copy of a Swan Mark I linear amplifier, will pay costs, can anybody help?? Thanks Louie

2976. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: "Henry A. Kolesnik" <wd5jfr@tulsa.oklahoma.net>
Message-ID: <38F09D0E.59495050@tulsa.oklahoma.net>
Source record: 61531
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

if they're the same voltage they'll improve regulation...
one thing i'm not sure of is whether or not the recitifer pack can
withstanding the greater surge when you first turn it on..
if it can't it'll short and you can always replace it with newer higher rated
diodes..
or do it at the same time..
you could install a small resistor preferably a globar if they still make
them..
good luck
hank

W5IDX wrote:

> I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
> 572B
> The Original Caps Are 100uf. (500 Volt) 8 In Quantity
>
> 1: If I Used 450uf What Would Happen. ?
> 2: What Do You Suggest. ?
> 3: Would Quality Of The Output Be Degraded ?
>
> Thank You W5IDX
> W5IDX@ qsl.net

2977. Re: Address for Ramsey Electronics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Sandy <n9pgo@mediaone.net>
Message-ID: <38F09EB6.210459FB@mediaone.net>
Source record: 61532

http://www.ramseyelectronics.com/
OrderDesk@ramseyelectronics.com

Renfred wrote:

> Hi peoples,
> can somebody give me the email address for Ramsey
> Electronics in NY who provide some of the kits used in the ARRL
> handbook?
> Thanks, Renfred ZL1BDL

2978. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <38F0A6B6.C2D3AB9E@carroll.com>
Source record: 61533
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Would tend to decrease power supply ripple, and slightly increase B+.
However, the increased charging current may be hard on the rectifiers unless
you use a step-start or other inrush current limiting scheme.

Bob Weiss N2IXK

W5IDX wrote:

> I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
> 572B
> The Original Caps Are 100uf. (500 Volt) 8 In Quantity
>
> 1: If I Used 450uf What Would Happen. ?
> 2: What Do You Suggest. ?
> 3: Would Quality Of The Output Be Degraded ?
>
> Thank You W5IDX
> W5IDX@ qsl.net

2979. Re: Help! Data Needed!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <SD2I4.77101$17.1652054@news4.giganews.com>
Source record: 61534

I have added some notes below.

73, Bob K6DDX

"gbowne" <gbowne@email.msn.com> wrote in message
news:OHHcvdco$GA.321@cpmsnbbsa04...
> Dear All list members,
>
> Can anyone help me locate the companies listed in the 30th Edition of the
> ARRL Radio Amateurs Handbook published in 1953? I would like their Last
> Known Addresses, Current Address, Phone Numbers, website addresses,
> subsidierys, etc. and any other useful information. Please submit any
> information you can provide to
> gbowne@email.msn.com
>
> The companies (as listed in the 1953 index) are:
>
> Advance Electric & Relay Co.
> Allied Radio Corp. Still a viable company with web site and all
> American Lava Corp.
> American Phenolic Corp. This is Amphenol, still in business
> American Radio Relay League Check out their web site
> American Television & Radio Co.
> Amperex Electronic Corp. I think these people are still around
> Ashe Radio Co. I suspect they are gone
> Barker and Williamson, Inc. Still around, making switches and antennas
> Belden Manufacturing Very big cable and wire company, very much alive
> Bliley Electric Co.
> Bud Radio, Inc.
> Burstein-Applebee Co. Long gone, unfortunately
> Cameradio Co., Inc. Long gone
> Candler System Co.
> Cannon Electric Co. Now called ITT Cannon, connector company
> Centralab
> Collins Radio Co. Now Rockwell-Collins but don't do ham gear any more
> Concord Radio Became Lafayette-Concord then went out of business
> Cornell-Dubilier Electric Corp. Still around as CDE
> Dale Electronics Distributors
> Eitel-McCullough, Inc. This is Eimac, and they only make ceramic tubes
now
> Eldico of New York, Inc. Long gone, I am sure
> Electric Soldering Iron Co., Inc. This became ESICO dunno what happened
next
> Electronic Instrument Co., Inc. This was EICO. Moved to Florida from
Brooklyn then faded away

> Electrons, Inc.
> Electro-Voice, Inc. Still around
> Erie Resistor Corp.
> Federated Purchaser, Inc. Long gone
> Fort Orange Radio Distributing Co.
> Freed Transformer Co. Long gone, I think
> Gates Radio Co.
> General Electric Co.
> Hallicrafters Co., The Out of business when Bill Halligan died
> Hammarlund Mfg. Co., The No longer around, I am sure
> Harrison Radio Corp.
> Harvey Radio Co.
> Harvey-Wells Electronics, Inc. Gone the way of old electronics outfits
> Heath Co., The No longer making ham gear, perhaps nothing at all
> Henry Radio Stores There is still a Henry Radio in Los Angeles
> Hudson Radio & Television Corp.
> Hughes Research & Development Labs This is Hughes Aircraft, still around
> Illinois Condenser Co. Still around as Illinois Capacitor Co.
> Instructograph Co. Long gone
> Insuline Corporation of America
> International Rectifier Corp. Still around, makes power FETs. Bought out
by ??
> International Resistence Co.
> Johnson Co, E.F. Still make hardware and commercial radios I think
> Kenyon Transformer Co., Inc.
> Kieruff Electronics, Inc. Absorbed into one of the major distribotors,
forgot which
> Knights Company, The James Bought out, became CTS Knights
> LaPointe-Plascomold corp.
> Macmillan Co., The
> Mallory & Co., Inc., P.R. Still very much around
> Master Mobile Mounts, Inc.
> McElroy Manufacturing Co. Gone
> Measurments Corp.
> Merit Transformer Corp. Merged with Stancor I think
> Midland Manufacturing Co., Inc. Still around, make commercial radios
> Millen Manufacturing Co, Inc., The James
> National Co., Inc. Long gone
> Newark Electric Co. One of the big distributors, very much in business
> Ohmite Manufacturing Co.
> Par -Metal Products Corp.
> Precise Measurments Co. Gone, I am sure
> Precision Apparatus Co. Inc. Gone
> Radio Corporation of America Bought out by GE a few years ago
> Radio Products Sales, Inc. Merged and is part of a giant distributor now
> Radio Shack Corp. Still around, unfortunately
> Shure Brothers, Inc. Very big, mostly microphones
> Shurite Meters
> Sprague Products Co. Broken apart and sold to various companies
> Standard Transformer Corp.

> Superior Instruments Co.
> Supreme, Inc. Long gone
> Terminal Radio Corp.
> Times Facsimile Corp.
> Triplett Electrical Instrument Co. Still around, make service quality
test gear
> Turner Co., The
> United Electronics Co.
> United Transformer Co.
> Valpey Crystal Corp.
> Vibroplex Co., The
> Waterman Products Co., Inc. Long gone
> Wile, Eugene G.
> Wincharger Corp.
> World Radio Laboratories, Inc. Became a stereo store, dunno where they
went
>
> Thanks,
> Gregory Bowne
> gbowne@email.msn.com
> KB7IIF
> Washington State ARA at its best!
>

73, Bob K6DDX

2980. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: jayomegac@aol.com.wospam
Message-ID: <20000409163141.04115.00000602@ng-cu1.aol.com>
Source record: 61535

Ralph Mowery rmowery@dialpoint.net wrote:

>Sometimes the swr will appear to change if low power vers high power is
>used. There are basically 2 reasons for this. One is the transmitter
>is generating power (harmonics) at other than the carrier frequency and
>the antenna is not matched for the harmonic. The other reason is the
>diodes that is used in the swr bridge are not linear for various power
>levels.
>

There's one more reason, of course: the high power causes something in the load to change. The load could be simply non-linear, or it could suffer from heating effects.

73,
Jay

2981. For Sale - Various Items

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <38F0E78D.F59A366A@getnet.com>
Source record: 61536
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

Items For Sale....pictures and details at
http://www.getnet.com/~davidh/forsale5.html

All items are sold "as-is". Items will be shipped via USPS from Phoenix,
AZ 85020.

******* I will ship international ******

Contact Dave N7RK at davidh@getnet.com

"Very Nice" National NC-98 Receiver and Matching Speaker $325 + Shipping

Multi-Elmac A54H Mobile Transmitter - $80 + shipping

5894, HY75 and 3C24/24G Transmitting Tubes - $40 + Shipping

B&W Model 600 Grid Dip Meter - $50 + shipping

Heathkit Twoer - $40 + Shipping

Taylor TZ20 Triode Transmitting Tube - $25 + shipping

Thanks for looking!

--
****

Dave N7RK - Webmaster CADXA
Phoenix, Arizona *DXCC Honor Roll* *WAZ#23 - 75 Meter SSB*

ex-XE2/N7RK, N7RK/ZB2, VK2ERK, ZM0AJN, WB6NRK, WN6IWX

Boatanchor Collector Extraordinaire preferring Hallicrafters, National
and what ever else looks interesting!

E-Mail: davidh@getnet.com My Home Page: http://www.getnet.com/~davidh

Visit the Central Arizona DX Association Home page - http://cadxa.org

2982. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: ham_guy@webtv.net
Message-ID: <18363-38F0F7A7-100@storefull-132.iap.bryant.webtv.net>
Source record: 61537

Ralph,
It sounds like you are a very considerate operator. Many times,
I've encountered the signal of someone 'tuning up' on the air with a
heckova lot of power. Out of disgust and curiosity as to who and why,
I'd listen to the entire tune up procedure, just to see who the yokel
was, when he started his "CQ". Maybe it is a coincidence, but in every
instance this happened, the operator began speaking in a Spanish
dialect. Maybe this is the approved method in South American countries.
(???) Guy

2983. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: k6hm <k6hm@wenet.net>
Message-ID: <38F1467F.3A67FFB4@wenet.net>
Source record: 61538
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Hi,
It is getting very difficult to find new 500V caps. Therefore the only solution is to use 450V caps which is being used for Power factor correction switching power supplies. Since you use 8 of them, it will make the total voltage to 3600V which is more than enough to handle 572B's because the maximum voltage to this tube is 2500V. You can actually improve the power supply high voltage regulation by using larger capacitance caps like 220 uF. New technology enables the size get smaller so you can find the same size as the original ones with twice the capacitance. You can try electronics distributors like Future electronics for Rubycon, United chemicon,Elna,Nichicon who makes excellent quality parts.

Good luck.

de K6hm
Young
Thomas C. Sefranek wrote:

> W5IDX wrote:
>
> > I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
> > 572B
> > The Original Caps Are 100uf. (500 Volt) 8 In Quantity
> >
> > 1: If I Used 450uf What Would Happen. ?
>
> Increased ripple current, DECREASED Ripple voltage, perhaps increased average
> voltage.
>
> > 2: What Do You Suggest. ?
>
> GO for it! (Maybe add current limit resistance?)
>
> > 3: Would Quality Of The Output Be Degraded ?
>
> I doubt it. The times I've done it, the output was MORE stable.
>
> > Thank You W5IDX
> > W5IDX@ qsl.net
>
> 73
>
> --
> *
> | __O Thomas C. Sefranek tcs@cmcorp.com

> |_-\<,_ Amateur Radio Operator: WA1RHP
> (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
>
> http://hamradio.cmcorp.com/inventory/Inventory.html
> http://www.harvardrepeater.org

2984. Re: How does an SWR-Meter work?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-09 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <lycl4.1418$j7.131441@news-west.usenetserver.com>
Source record: 61539

"Jay OmegaC" <jayomegac@aol.com.wospam> wrote in message
news:20000409163141.04115.00000602@ng-cu1.aol.com...
> Ralph Mowery rmowery@dialpoint.net wrote:
>
> >Sometimes the swr will appear to change if low power vers high power is
> >used. There are basically 2 reasons for this. One is the transmitter
> >is generating power (harmonics) at other than the carrier frequency and
> >the antenna is not matched for the harmonic. The other reason is the
> >diodes that is used in the swr bridge are not linear for various power
> >levels.
> >
>
> There's one more reason, of course: the high power causes something in
the
> load to change. The load could be simply non-linear, or it could suffer
from
> heating effects.
>
> 73,
> Jay
>
>

Or arcing. This happens easily if you try to run high power through a tuner to a load that has high SWR. The voltages can become quite high. I have arced across the phenolic insulator of a PL-259 by doing this. A carbon trail forms and it will arc more easily after the first time. If you need to run more than 100W into high SWR, consider teflon-insulated connectors, and check the working voltage of your feedline. Some, such as RG-8X foam, won't tolerate much SWR at 1500W.

Cheers
Carl WS7L

2985. links to qrp rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: mojaveplan@my-deja.com
Message-ID: <8crii7ngu1@nnrp1.deja.com>
Source record: 61540

a while back, someone posted a link to a page that had links to almost all the qrp kit manufacturers one could imagine. of course, my pc crashed and i lost the link page. if you have a link that has lots of qrp kit mfgr's links could you please post it. thanks to all. 73
jeff n7aiz

Sent via Deja.com http://www.deja.com/
Before you buy.

2986. links to qrp rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: mojaveplan@my-deja.com
Message-ID: <8crlcs$qi6$1@nnrp1.deja.com>
Source record: 61541

a while back, someone posted a link to a page that had links to almost all the qrp kit manufacturers one could imagine. of course, my pc crashed and i lost the link page. if you have a link that has lots of qrp kit mfgr's links could you please post it. thanks to all. 73
jeff n7aiz

Sent via Deja.com http://www.deja.com/
Before you buy.

2987. WTB: 5 Volt 30 Amp Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: lrbety@aol.com
Message-ID: <20000410005758.29130.00000736@ng-cc1.aol.com>
Source record: 61542

Want to buy 5 volt 30 amp transformer for pair of 4-400A.

Please email direct.

David Beard
WA4QGA
lrbety@aol.com

2988. Re: WTB: Chimney for 4-400

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: lrbety@aol.com
Message-ID: <20000410010011.29130.00000737@ng-cc1.aol.com>
Source record: 61543

Jim,

I don't have any spare chimneys but I am looking for a 5 volt 30 amp filament transformer for a pair of 4-400s.

BTW, I have used Coleman lantern chimneys before on 4-400's. Probably what I will use on the amp I am working on.

Thanks,
David Beard
WA4QGA

2989. FT-101 Finals Replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: oldgear@aol.com
Message-ID: <20000410055436.29118.00000785@ng-cc1.aol.com>
Source record: 61544

Hi
I was told of a modification for replacement of the 6JS6C with 6146's in the FT-101. It was published in the May 1999 issue of QST. If anyone has a scanned copy on file can you please email one to me
Thanks

2990. Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: VR2RD <cbiumak@ctimail3.com>
Message-ID: <8cscu7$l1u$1@news.ctimail.com>
Source record: 61595

Hi,

Can anyone tell me how to reomove paints on fine copper wire. I used a knife and the wire broke.

73
VR2RD

2991. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <IfkI4.25$lZ5.2623@bos-service2.ext.raytheon.com>
Source record: 61596

In article <8cscu7$l1u$1@news.ctimail.com>, cbiumak@ctimail3.com says...
>
>Hi,
>
>Can anyone tell me how to reomove paints on fine copper wire. I used a
>knife and the wire broke.
>
>73
>VR2RD

If the finish is lacquer, try either Acetone or Lacquer Thinner.
If it's an oil-based enamel, try chemical paint stripper. Both
should be available at hardware stores. Ladies' finger nail polish
remover often contains Acetone.

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

2992. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8cskbp$r9g$1@ausnews.austin.ibm.com>
Source record: 61597

In <IfkI4.25$lZ5.2623@bos-service2.ext.raytheon.com>, k5dh@raytheon.com (Dean Hemphill, K5DH) writes:
>In article <8cscu7$l1u$1@news.ctimail.com>, cbiumak@ctimail3.com says...
>>
>>Hi,
>>
>>Can anyone tell me how to reomove paints on fine copper wire. I used a
>>knife and the wire broke.
>>
>>73
>>VR2RD
>
>If the finish is lacquer, try either Acetone or Lacquer Thinner.
>If it's an oil-based enamel, try chemical paint stripper. Both
>should be available at hardware stores. Ladies' finger nail polish
>remover often contains Acetone.
>
>73,
>Dean, K5DH
>Visit my amateur radio web site at http://www.qsl.net/k5dh
>

I seem to remember using a match or cigarette lighter to burn the insulation off. Of course, it stinks (and the by-products probably aren't healthy to breathe).

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

2993. Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: n1bug@mint.net
Message-ID: <38f1ed38.979971@news.mint.net>
Source record: 61598

Howdy folks,

I have volunteered to edit the Amateur Radio: Homebrew category (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open Directory Project (http:/www.domz.org/). If you take a look at the current listings you will see this category needs some additions!

If you have or know of a web site that has information on ham radio homebrew, PLEASE send me the URL for review! I am primarily looking for web sites offering project plans/schematics, but will list others if they pertain directly to home construction of ham radio equipment.

Thanks...

Paul N1BUG

2994. Re: I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: n1bug@mint.net
Message-ID: <38f1ef42.1502088@news.mint.net>
Source record: 61599

"Thomas C. Sefranek" <tcs@cmcorp.com> wrote:

>I envy your attitude!
>I'm a consummate builder at home and at work.
>
>If I could only FIND folks, blind or otherwise, that had that thirst for
>building.
>
>I hold Ham Radio night every monday night at my house to help folks learn
>and build "Stuff" and the numbers of interested folks are dropping off.

What a great idea! Now if only I could get folks interested in
building "stuff" around here!

I have enjoyed 19 years of building so far, and look forward to many
more. To me it's (in most cases) more fun than getting on the air to
use the stuff I've built. For every rule there is an exception, and I
will admit I'd rather be digging weak ones out of the noise on EME
than sitting at the workbench with a hot soldering iron...

73,
Paul N1BUG

2995. Bepaid $600 bucks!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: cpeasl@aol.com
Message-ID: <20000410114233.08670.00000747@ng-cj1.aol.com>
Source record: 61600

Follow the link for more faq's.

http://www.bepaid.com/user.rhtml?REFID=10202810

2996. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <kbnl4.34613$9g4.794133@news5.giganews.com>
Source record: 61601

You can also use sandpaper.

2997. Re: FT-101 Finals Replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: TC <cadigant2@uofs.edu>
Message-ID: <38F2077F.886BB7F5@uofs.edu>
Source record: 61602

If you don't get any help with a scanned version. Drop me some e-mail
and I'll copy the article and mail it . I don't have access to
scanner, but can easily copy the pages.

Tim Cadigan, WC1F
cadigant2@uofs.edu

2998. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Jim <jweidner@mosquitonet.com>
Message-ID: <38F21341.7CFAE6F6@mosquitonet.com>
Source record: 61603
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

you might need to put in a wire wound surge resistor to protect the rectifiers.

And a fuse to protect the tubes / amp deck if there is short.

NO MATTER WHAT Make absolutely sure the bleeder resistor is good! Else you could become a silent key. You would have 4.5x the prior capacitance. 48 mfd @ 4kv will take a finger right off!

It is a good idea to use the same voltage .... if they will fit.

KLIEH

W5IDX wrote:

> I Have A Few Question In Repairing A HV Power Supply For An Amplifier (4)
> 572B
> The Original Caps Are 100uf. (500 Volt) 8 In Quantity
>
> 1: If I Used 450uf What Would Happen. ?
> 2: What Do You Suggest. ?
> 3: Would Quality Of The Output Be Degraded ?
>
> Thank You W5IDX
> W5IDX@ qsl.net

2999. Re: Grounds

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: KD7FLE@yahoo.com
Message-ID: <38f22f0a.17391668@news.teleport.com>
Source record: 61604

On 09 Apr 2000 11:13:09 GMT, gudguyham@aol.com (Gudguyham) wrote:

>Very true what you say!! I agree...M

<snip>

Yep, this has been my findings. Also, if you do decide to try to get a local inspector overturned, lord help you on the NEXT job! I have provided documentation including UL Tests, NEC code and manufactures documantation, and STILL had an inspector turn it down. (And he was clearly wrong). The state guy said he MAY have been wrong, but it was the local guy's interpretation, and he would NOT overrule it. The contractor ended up tearing out the service (on an apartment building) and we GAVE them a new one.

Don't ask me what I think of most electrical inspectors. :-(Of course, speaking for myself, not my employer!

73, and gud luck!

73, Ken KD7FLE
Milwaukie, OR SOC# 254

3000. Want sked CW / VLP (=<0,5w) 40m EU

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: "D@niel" <dsavel@easynet.fr>
Message-ID: <M2rl4.43073$J3.34732@tengri.easynet.fr>
Source record: 61605

All in tittle... I'm looking for sked in Europa (a dream...USA ?) CW / VLP
Pwr =< 0,5w.

72 D@niel F5ITU

3001. Re: FT-101 Finals Replacement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38f23bf2.93127751@news.online.no>
Source record: 61606

On Mon, 10 Apr 2000 12:55:27 -0400, TC <cadigant2@uofs.edu> wrote:

>If you don't get any help with a scanned version. Drop me some e-mail
>and I'll copy the article and mail it . I don't have access to
>scanner, but can easily copy the pages.
>
>Tim Cadigan, WC1F
>cadigant2@uofs.edu
>
the article was mentioned in Radcom 12/99 with correction (base
wiring) in 4/00

3002. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ctj95$3l3$1@plutonium.btinternet.com>
Source record: 61607

Try paint stripper obtainable from your local do it yourself
decorating store. Dip for a few seconds then wipe it off with a clean
rag.

3003. QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Grace Cunningham <johngrac@surfsouth.com>
Message-ID: <38F2571D.32A2@surfsouth.com>
Source record: 61608

I'm putting up a qrp station at home and need to know what tuner to use.
Any advice is welcome! KE4QOP John

3004. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <38F26E72.2B5589B6@rsg.org>
Source record: 61609

Paul,

See homebrewer's site at:

http://www.mbn.net/kd9jq/hamradio

73 Chuck KD9JQ

Paul Kelley wrote:

> Howdy folks,
>
> I have volunteered to edit the Amateur Radio: Homebrew category
> (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
> Directory Project (http:/www.domz.org/). If you take a look at the
> current listings you will see this category needs some additions!
>
> If you have or know of a web site that has information on ham radio
> homebrew, PLEASE send me the URL for review! I am primarily looking
> for web sites offering project plans/schematics, but will list others
> if they pertain directly to home construction of ham radio equipment.
>
> Thanks...
>
> Paul N1BUG

3005. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <38F282CB.4493@pop.removethistomailme.net>
Source record: 61610

Paul Kelley wrote:
>
> Howdy folks,
>
> I have volunteered to edit the Amateur Radio: Homebrew category
> (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
> Directory Project (http:/www.domz.org/). If you take a look at the
> current listings you will see this category needs some additions!
>
> If you have or know of a web site that has information on ham radio
> homebrew, PLEASE send me the URL for review! I am primarily looking
> for web sites offering project plans/schematics, but will list others
> if they pertain directly to home construction of ham radio equipment.
>
> Thanks...
>
> Paul N1BUG

My site is listed in the .sig below (http://www.qsl.net/ke5fx).

Also, AC6V has a VERY large collection of links at
http://www.ac6v.com/pageA.html.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3006. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-10 00:00:00 UTC
From: Ron Ostman <w0nyq@minntaccdp.com>
Message-ID: <8cuaas$bv7$1@news1.spacestar.net>
Source record: 61611

GC Electronics makes a product known as "Strip-X" which is used to strip enamel covered magnet wire, etc. I've used it to stip very fine "Litz" wire and 30 AWG magnet wire. It is very caustic and comes with the usual warnings about handling and use.

Ron, W0NYQ

3007. Better Newsgroup for VHF/UHF DX? - de.comm.ham

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38f24e33.97801351@news.online.no>
Source record: 61612

While most newsgroups have much noise and lots of trade, but low
degree of information a different newsgroup is the "de.comm.ham"

73
Jan-Martin
LA8AK

...
13. VHF-UHF-SHF-Tagung in M&#65533;nchen
****

Jedes zweite Jahr im M&#65533;rz findet in M&#65533;nchen eine UKW-Vortragstagung statt, auf der die neuen Entwicklungen im UKW-Amateurfunk vorgestellt werden. Ausrichter ist der Distrikt Bayern-S&#65533;d, welcher die Veranstaltung wieder in entsprechendem Rahmen (QTH: Fachhochschule) durchgef&#65533;hrt hat, und neben den Vortr&#65533;gen auch Messpl&#65533;tze und einen Flohmarkt sowie eine preisg&#65533;nstige Verpflegung organisierte.
....

3008. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38f367f7.32644314@news.eunet.yu>
Source record: 61613
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

3009. F.S.2-meter HB amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Wayne Strickland <w9bbb@megsinet.net>
Message-ID: <38F37F19.B7671232@megsinet.net>
Source record: 61614

Hi,I've got a H.B 2-meter amp.Uses a RCA 829b Tube.Drv req 2-10 watts
and outputs about 60 watts on FM.More on SSB.Has a multi-function meter
and a pwr sw,also a stby sw.$100.00 or B/O Wayne

3010. needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Roelof Fouche <zs4rf@intekom.co.za>
Message-ID: <8d008d$s9n$1@ctb-nnrp1.saix.net>
Source record: 61615

I'm looking for a instruction manual for a Yaesu FT 757 GX
and a diagram to build a 2 element QQ.

3011. Re: new QRP MFJ 2W Cub Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Steve Silverwood <kb6ojs@arrl.net>
Message-ID: <MPG.135d2affa9bebd349897c0@news.gte.net>
Source record: 61616

In article <20000408173118.15265.00000412@ng-cn1.aol.com>,
rsylvan662@aol.com says...
> Has anyone used the new MFJ 2W Cub Xcvr. Have you had good results with it? I
> would like to buy one, but its not easily available yet

Not surprising, it's not even on their web site yet that I can find! ;-)

--

-- // Steve //

Steve Silverwood, KB6OJS AOL Instant Messaging: "stevesilverwood"
Fountain Valley, CA MSN Messenger: "kb6ojs"
Email: kb6ojs@arrl.net Yahoo! Messenger: "kb6ojs"
Home page: http://home1.gte.net/kb6ojs

3012. 2SC2879 ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38F39ADD.D1560E22@ica.net>
Source record: 61617

Looking for a matched pair of 2SC2879 RF power transistors or
recommendations on where to get them.
Please reply by e-mail.
Thanks.

3013. Re: 2SC2879 ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: jbickel@iquest.net
Message-ID: <38f3a1be.3965650@news.iquest.net>
Source record: 61618

On Tue, 11 Apr 2000 17:36:29 -0400, Ham <hduff@ica.net> wrote:

>Looking for a matched pair of 2SC2879 RF power transistors or
>recommendations on where to get them.
>Please reply by e-mail.
>Thanks.
>

http://www.rfparts.com/2sc.html

3014. Re: Homebrew antenna switch - what components to use.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8d0dfc$bh5@unix1.cc.ksu.edu>
Source record: 61619

Someone wrote:
>You would do best with a ceramic insulated rotary switch. The ceramic is
>low loss and has a high dielectric strength. Low capacitance across
>contacts. Get one with substantial contacts, as you will be carrying
>considerable current.

Let's see: at SWR = 1:1, Power = CurrentSquared times Resistance, so
Current = SQR(power/Resistance) = SQR(350/50) = 2.6+ amps.

Add some more for the SWR.... ???

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

3015. Determining Trap Resonance with MFJ 259B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Gary Ferdinand <gferdinand@ipass.net>
Message-ID: <rgRI4.177$xO4.790@saturn.ipass.net>
Source record: 61620

Anyone have experience using an MFJ 259B analyzer to determine the resonant frequency of a coaxial trap? Specifically, I'm looking for guidance on the following:

1. How to set up a test bench. How to couple the MFJ to the trap? Any precautions in the environment to avoid skewing the measurement? Here I'm talking about getting the trap at the proper resonant frequency PRIOR to hooking it into the antenna.

2. Verification of how to correctly read the result. I'm presuming I set it up to read impedance and then tune the frequency to PEAK the impedance (the trap is a parallel LC and should look "infinite" at resonance)?

3. With respect to antenna (dipole) construction, I am planning to feed the highest frequency band with the first pair of traps first, and cut the inner wire for best match at chosen frequency. Then add wire and the next trap and do it for the next lower frequency band, etc., down the bands. The plan is for a brute force (3 traps per side) 10/12/17/30 meter dipole. Anyone have a better method or see any pitfalls in this one? (Other than the usual remarks to "have fun" cutting and twisting!) For a while I thought of trying to lower the number of traps by tuning a pair between two bands and making use of the capacitive or inductive reactance to lengthen/shorten a 3/2-wave affair (30-to-10), but decided I wasn't smart enough for that and am going the brute force approach.

4. Any gotchas from the school of hard knocks?

TIA/73,

Gary W2CS
Apex, NC

3016. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <s145fs4g9ul8n0tm4r35s5ov28hhdjtoj0@4ax.com>
Source record: 61621

"VR2RD" <cbiumak@ctimail3.com> wrote:

>Can anyone tell me how to reomove paints on fine copper wire. I used a
>knife and the wire broke.

Heat it up in a small flame until the wire just glows dull red. Let it
cool and then draw it between a folded piece of very fine (400-600
grit) sandpaper to take off the oxide.

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

3017. FA: HP 606 RF Signal Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <p9SI4.180$U3.13435@newsfeed.avtel.net>
Source record: 61622
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

see it at: http://www.electronbay.com/lot.cfm?lotID=131

3018. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <ewTI4.131777$Pa1.3501729@news6.giganews.com>
Source record: 61623

The most reliable way is with a heat stripper. Unfortunately, the fumes from teflon are extremely toxic and you must find a way to avoid breathing even the least bit of it. I did that once and thought I was going to die.

I red hot wire will melt the teflon away from the conductor.

73, Bob K6DDX

3019. Re: Determining Trap Resonance with MFJ 259B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-11 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <JFTI4.42323$9g4.907351@news5.giganews.com>
Source record: 61624

MFJ sells a grid dip meter accessory for the impedance meter but you can make one with just a coil. Put the coil across the terminals and use it to couple to the inductor of the trap. Tune the meter until you hit resonance; it will be obvious. If the Q is reasoable, the peak should be sharp.

You might want to try building an antenna without traps. Make a series of dipoles for each band and connect them together at the center, use a balun and run one feeder.

Or you can try what I did. I built a 2 element yagi for 12 and 17 meters. I feed the 17 meter driven element with a balun and coaxial cable. The 12 meter driven element is coupled just by being a few inches away from the 17 meter driven element. It works great.

73, Bob K6DDX

3020. Re: 2SC2879 ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: goldreged@aol.comJUNKBLOK
Message-ID: <20000411205123.20592.00001088@ng-fy1.aol.com>
Source record: 61625

<<Looking for a matched pair of 2SC2879 RF power transistors or
recommendations on where to get them.
Please reply by e-mail.
Thanks.>>

http://www.rfparts.com
sells them cheap....
a matched set of 16 is under $300
Ed G.
KB1DQX
(Please Remove "JUNKBLOK" to E-mail.
Unless it's a Flame.)

3021. FA Old Weston VOM,s

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: wa4uso@aol.com
Message-ID: <20000411210226.03466.00000832@ng-fu1.aol.com>
Source record: 61626

I have 3 old Weston VOM,s possibly made in the late to mid 1920,s.
They are, Model 785 - Industrial Circuit Tester
and Two units in a oak carrring case, Models 665 and 664
Selective Analyzer and Capacity Meter

All units are working, would like to find a good home for all,
please email wa4uso@aol.com if interested

3022. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <peRI4.1045$X56.56196@typhoon1.gnilink.net>
Source record: 61627

When in a hurry, I use a butane cigarette lighter for heating the mag. wire coating, and then gently scrape the wire with a razor blade on the bench at different angles. A finger-patch of fine sandpaper might be used to burnish it further?... Ed. K3FDY.

VR2RD wrote in message <8cscu7$l1u$1@news.ctimail.com>...
>Hi,
>
>Can anyone tell me how to reomove paints on fine copper wire. I used a
>knife and the wire broke.
>
>73
>VR2RD
>
>

3023. TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <_kRI4.1050$X56.56646@typhoon1.gnilink.net>
Source record: 61628

Is there a reliable way to strip #30, double E, and single E, stranded teflon wire without nicking and breaking any of the conductors?.....

3024. WTB: GENRAD 1201B or 1201C Supplies

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: Groovy Toones <groovy_toones@hotmail.com>
Message-ID: <vKRI4.2459$4w1.36522@typhoon.nyroc.rr.com>
Source record: 61629
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap,sci.electronics.components,sci.electronics.equipment,sci.electronics.parts

WTB: GENRAD 1201B or 1201C Supplies

3025. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: Randy L Henderson <randylh@flash.net>
Message-ID: <38F3FE8C.271E@flash.net>
Source record: 61630

Paul Kelley wrote:
>
> Howdy folks,
>
> I have volunteered to edit the Amateur Radio: Homebrew category
> (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
> Directory Project (http:/www.domz.org/). If you take a look at the
> current listings you will see this category needs some additions!
>
> If you have or know of a web site that has information on ham radio
> homebrew, PLEASE send me the URL for review! I am primarily looking
> for web sites offering project plans/schematics, but will list others
> if they pertain directly to home construction of ham radio equipment.
>
> Thanks...
>
> Paul N1BUG

http://www.flash.net/~randylh/

Has some info on a microprocessor controlled, synthesized, 9-band HF transceiver (SSB + CW) described in the book - Build Your Own Intelligent Amateur Radio Transceiver. This site is mainly an addendum to the book.

Randy, WI5W

3026. Re: QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: Dr Mike Addlesee <maddlesee@uk.research.att.com>
Message-ID: <38f44d84.0@nnrp1.news.uk.psi.net>
Source record: 61631

Single coil Z-match seems to get good things said of it.
See URLs:
http://staff-www.uni-marburg.de/~cappelle/z-match.html
http://www.pconline.com/~rohrwerk/k0jd/z-match.html
http://www.natworld.com/ars/pages/back_issues/0698_text/ffd.html
--
Dr Mike Addlesee
AT&T Laboratories Cambridge
24a Trumpington Street
Cambridge CB2 1QA U.K.

3027. Re: testing transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B51A2099966824991@dial4.netcentral.co.uk>
Source record: 61632

In article <sek25uiseop54@corp.supernews.com>,
"K4nky" <k4nky@arrl.org> wrote:

>i have a cb radio someone gave and want to convert to 10 meters...did not
>have any recieve and found broken lead to so-239...recive ok now but no
>transmit suspect that maybe they keyed into open and blew final...can i test
>the transistor without removing it from the rig...its a 2cs2078 in a 220
>case
>

Cheapskate. The 2SC2078 only costs a dollar. ;o)
Throw it away and fit a new one. Be sure to use heatsink thermal compound.

Uh, you might need my book about converting CBs to 10 meters:

Martin Pickering
http://www.satcure.co.uk/cb/cbbooks.htm

3028. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38f46766.2175295@news.eunet.yu>
Source record: 61633
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

3029. Re: Determining Trap Resonance with MFJ 259B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000412104708.17588.00000618@nso-fk.aol.com>
Source record: 61634

In article <rgRI4.177$xO4.790@saturn.ipass.net>, "Gary Ferdinand"
<gferdinand@ipass.net> writes:

>Anyone have experience using an MFJ 259B analyzer to determine the resonant
>frequency of a coaxial trap?

I use a grid dip meter - an ancient Heath GD-1B. Does the 259 have an accessory
coil that turns it into a dipper? That's how I'd test them.

>Specifically, I'm looking for guidance on the
>following:
>
>1. How to set up a test bench. How to couple the MFJ to the trap?

Inductively. Connecting wires to the trap, even short ones, skews the
measurement.

>Any
>precautions in the environment to avoid skewing the measurement?

Trap should be a foot or more away from anything metal. Coupling should be very
loose. Hanging a trap from the ceiling on twine or monofilament is not a bad
idea at all.

> Here I'm
>talking about getting the trap at the proper resonant frequency PRIOR to
>hooking it into the antenna.

That's exactly the right way to do it. And once you have them set up, don't
fool with them.

I use the trap construction described in N4UU's article in December, 1984 QST.
I have found that coax and PVC pipe manufacturing tolerances are such that you
need to make a test trap to get the right size. I have done several posts on
this in rraa - you can see them in deja.com.
>
>2. Verification of how to correctly read the result. I'm presuming I set
>it up to read impedance and then tune the frequency to PEAK the impedance
>(the trap is a parallel LC and should look "infinite" at resonance)?

Yep. When using a dipper, you want the dip frequency.
>
>3. With respect to antenna (dipole) construction, I am planning to feed the
>highest frequency band with the first pair of traps first, and cut the inner
>wire for best match at chosen frequency. Then add wire and the next trap
>and do it for the next lower frequency band, etc., down the bands. The
>plan is for a brute force (3 traps per side) 10/12/17/30 meter dipole.

>Anyone have a better method or see any pitfalls in this one? (Other than
>the usual remarks to "have fun" cutting and twisting!) For a while I
>thought of trying to lower the number of traps by tuning a pair between two
>bands and making use of the capacitive or inductive reactance to
>lengthen/shorten a 3/2-wave affair (30-to-10), but decided I wasn't smart
>enough for that and am going the brute force approach.

I would just build the whole antenna, and see where the minimum SWR points are. Then I'd adjust the innermost wires to get resonance on the highest band, then the next-outer wires to get resonance on the next-lower band, etc. There is always some interaction. Don't do your adjustment at the trap connection itself - put pieces of wire on each trap, and have a splice in each wire section for adjustment.

To make adjustment easier, get a handful of "split bolt" connectors from Home Depot or an electric supply house. Also called "bugs" or "Burndys", these look like a bolt and nut combo in which a slot has been cut longise in the bolt. You just lay two wires parallel in the slot and tighten the nut to make a tight electrical and mechanical connection. Use them to find the right lengths, THEN make good solder joints and recover the "Brundys" for the next project. They're not cheap, but they sure make the job easier.
>
>4. Any gotchas from the school of hard knocks?
>
YES!!!!

Coaxial-cable-and-PVC-pipe traps are NOT perfectly symmetrical. That is, it matters which end of the trap goes towards the feed point! I had all sorts of confusing results when trying to duplicate an antenna because I was putting the traps in differently after each adjustment!

Either way will work, but you get different wire lengths one way vs. the other. (I'm talking about traps where you wind a length of coax on a piece of PVC pipe, then connect the inner conductor of one end to the outer conductor of the other. The "free" ends are connected to the antenna. N4UU style). I settled on the convention of "the center conductor connection goes towards the center of the antenna" but it doesn't matter (in my experience) as long as you do it the same way on both sides of the dipole.

W8NX has done some really good articles in QST, too. But my "bible" is the N4UU article.

73 de Jim, N2EY

3030. Re: Determining Trap Resonance with MFJ 259B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: jflanders2@home.com
Message-ID: <38f4ac39.48627643@news>
Source record: 61635

Read up on the MFJ "grid-dip" accessory coils for the 259 at the MFJ
website. I remember reading it and it included some useful practical
information like this. It is pretty easy to make a coupling coil to
use for the "grid-dip" thingie.

Jerry W4UK

On Tue, 11 Apr 2000 22:35:31 -0400, "Gary Ferdinand"
<gferdinand@ipass.net> wrote:

>Anyone have experience using an MFJ 259B analyzer to determine the resonant
>frequency of a coaxial trap? Specifically, I'm looking for guidance on the
>following:
>
>1. How to set up a test bench. How to couple the MFJ to the trap? Any
>precautions in the environment to avoid skewing the measurement? Here I'm
>talking about getting the trap at the proper resonant frequency PRIOR to
>hooking it into the antenna.
>
>2. Verification of how to correctly read the result. I'm presuming I set
>it up to read impedance and then tune the frequency to PEAK the impedance
>(the trap is a parallel LC and should look "infinite" at resonance)?
>
>3. With respect to antenna (dipole) construction, I am planning to feed the
>highest frequency band with the first pair of traps first, and cut the inner
>wire for best match at chosen frequency. Then add wire and the next trap
>and do it for the next lower frequency band, etc., down the bands. The
>plan is for a brute force (3 traps per side) 10/12/17/30 meter dipole.
>Anyone have a better method or see any pitfalls in this one? (Other than
>the usual remarks to "have fun" cutting and twisting!) For a while I
>thought of trying to lower the number of traps by tuning a pair between two
>bands and making use of the capacitive or inductive reactance to
>lengthen/shorten a 3/2-wave affair (30-to-10), but decided I wasn't smart
>enough for that and am going the brute force approach.
>
>4. Any gotchas from the school of hard knocks?
>
>TIA/73,
>
>Gary W2CS
>Apex, NC
>
>
>
>

3031. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38f4cb1c.1146143@news.online.no>
Source record: 61636

On Mon, 10 Apr 2000 19:41:31 -0600, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Paul Kelley wrote:
>>
>> Howdy folks,
>>
>> I have volunteered to edit the Amateur Radio: Homebrew category
>> (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
>> Directory Project (http:/www.domz.org/). If you take a look at the
>> current listings you will see this category needs some additions!
>>
>> If you have or know of a web site that has information on ham radio
>> homebrew, PLEASE send me the URL for review! I am primarily looking
>> for web sites offering project plans/schematics, but will list others
>> if they pertain directly to home construction of ham radio equipment.
>>
>> Thanks...
>>
>> Paul N1BUG
>
>My site is listed in the .sig below (http://www.qsl.net/ke5fx).
>
>Also, AC6V has a VERY large collection of links at
>http://www.ac6v.com/pageA.html.
>
>-- jm
>
>---
>http://www.qsl.net/ke5fx
>Note: My E-mail address has been altered to avoid spam
>---

another very good site to visit is
http://www.ifwtech.demon.co.uk/g3sek/

3032. need some schmatics for QRP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: Jimi Greydog <ringlord@earthling.net>
Message-ID: <j4j9fs4v464d0p97f8md5dq26pcji6tbjn@4ax.com>
Source record: 61637

Hi All..

Anybody got any schematics for small QRP (low-power) 6 and/or 40 meter transmitters or recievers or transcievers>> or even keyers?

Poverty level disabled huy (heart patient) is looking for same.. (I have a tech license and was going to bring up my code speed on 6-meters (legal for me) and then take the test and upgrade to the 40...

Anybody know how much of a bitch learning code is for a dyslexic person? Let me tell you.. it is TOUGH!

BUt well, one has to start somewhere.. and a good way is with building your own station, low power though it be..

hah, hah..

73
jim (KC7SVQ)
<sk>

3033. FS: Johnson Viking Rangers, Valiant, Henry 2K, Yaesu FT-101E station

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: pacqrat <toomuchstuff@pobox.com>
Message-ID: <ZT5J4.11481$q67.326655@newsread2.prod.itd.earthlink.net>
Source record: 61638
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Need money, need room. Good working rebuilt Valiant, good working totally rebuilt Ranger, another rebuilt Ranger believed to be working fine, Excellent FT-101E w/ X VFO and 2100B amp. Excellent '62 Henry 2K one-piece w/ new Dahl pwr xformer and good tubes. Matched pair of EImac 3-500Z's new in box for the Henry. Miscellaneous other stuff. See www.geocities.com/pacqrat for photos, details, location and/or email toomuchstuff@pobox.com Best serious offer.

3034. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-12 00:00:00 UTC
From: John Fields <jfields@austininstruments.com>
Message-ID: <38F4F177.3D89D8D1@austininstruments.com>
Source record: 61639
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>
> David Green wrote:
> > For the record, Bill's website gives a very good qualitative
> > explanation of a fascinating phenomenon that very few experts
> > in antenna theory are aware of.
>
> I'm stunned. That makes about THREE people in all of these
> forums who actually grasp this simple idea.

What idea?

John Fields, Overunity Laboratories, Inc.
El Presidente Austin, Republic of Texas
"I speak for the company" http://www.overunitylabs.com

3035. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8d3hlm$8kp$1@nnrp1.deja.com>
Source record: 61445
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In article <38F4F177.3D89D8D1@austininstruments.com>,
John Fields <jfields@austininstruments.com> wrote:
> Science Hobbyist wrote:
> >
> > David Green wrote:
> > > For the record, Bill's website gives a very good qualitative
> > > explanation of a fascinating phenomenon that very few experts
> > > in antenna theory are aware of.
> >
> > I'm stunned. That makes about THREE people in all of these
> > forums who actually grasp this simple idea.
>
> What idea?

Refer to the huge, noisy, and flamer-filled thread called
"energy sucking antennas." Briefly, the idea is that
a very small radio antenna can intercept approximately
the same amount of energy as a dipole antenna which is
1/pi wavelengths long. To create this effect, make the
small antenna be part of a resonant circuit. For example,
to make a small loop antenna act "large", put a variable
capacitor across it, then tune it to resonate at the frequency
that you're trying to receive. Or, to make a tiny dipole
"suck in" more EM energy, put a variable inductor across
it and tune it to resonance. If the Q of the resonator is
high, the effect is much larger.

The other half: a couple of physics papers suggest that
this explains why atoms can strongly interact with light,
even though atoms are typically thousands of times
too small to act like good antennas. A 0.1nM atom can
emit and absorb 600nM light. If we imagine it to be
a high-Q resonant circuit, then its strong interaction
with a particular frequency of light is sensible.

For a hyper-simplified example of how "small resonant
antennas" behave, see:

http://www.amasci.com/tesla/nearfld1.html

Here's another version aimed at fringe (crackpot) experimenters.

TESLA'S ENERGY RECEIVER
http://www.amasci.com/tesla/tesceive.html

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

3036. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38F57FAC.94250FFE@nospam.gecm.com>
Source record: 61446
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>
> a very small radio antenna can intercept approximately
> the same amount of energy as a dipole antenna which is
> 1/pi wavelengths long. To create this effect, make the
> small antenna be part of a resonant circuit. For example,
> to make a small loop antenna act "large", put a variable
> capacitor across it, then tune it to resonate at the frequency
> that you're trying to receive. Or, to make a tiny dipole
> "suck in" more EM energy, put a variable inductor across
> it and tune it to resonance. If the Q of the resonator is
> high, the effect is much larger.

. . . and you're saying this wasn't known 100 years ago?
(does this qualify me as a flamer?)
Alan

3037. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Alan Boswell <alan.boswell@nospam.gecm.com>
Message-ID: <38F5800C.B763F2A5@nospam.gecm.com>
Source record: 61447
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist wrote:
>
> a very small radio antenna can intercept approximately
> the same amount of energy as a dipole antenna which is
> 1/pi wavelengths long. To create this effect, make the
> small antenna be part of a resonant circuit. For example,
> to make a small loop antenna act "large", put a variable
> capacitor across it, then tune it to resonate at the frequency
> that you're trying to receive. Or, to make a tiny dipole
> "suck in" more EM energy, put a variable inductor across
> it and tune it to resonance. If the Q of the resonator is
> high, the effect is much larger.

. . . and you're saying this wasn't known 100 years ago?
(does this qualify me as a flamer?)
Alan

3038. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fb5qf.b5d.root@radioactivex.lebesque-al.net>
Source record: 61448
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist said some stuff about

> Refer to the huge, noisy, and flamer-filled thread called
> "energy sucking antennas." Briefly, the idea is that
> a very small radio antenna can intercept approximately
> the same amount of energy as a dipole antenna which is
> 1/pi wavelengths long. To create this effect, make the
> small antenna be part of a resonant circuit. For example,
> to make a small loop antenna act "large", put a variable
> capacitor across it, then tune it to resonate at the frequency
> that you're trying to receive. Or, to make a tiny dipole

Bzzzzzzzt. Your description here indicates that you still will attempt deception to obtain agreement to something not stated based on something that in general says nothing, but isn't objectionable apart from the rest of the conditions that are conveniently missing. The part you left out is where any disagreement begins. It's completely obvious that one can paramaterize any criteria regardless of what the physical implications are so long as one doesn't try to claim that it bears any resemblance to the physics. Your antenna requires the following additional constraint: 100% of the radiation through the cross-sectional area of the unoptimized antenna has been accounted for and that making the system resonant pulls in more than that by depleting the region surounding the antenna of radiation, which violates quite a list of physics that I and most people would regard as rather serious shortcomings for anything without ironclad evidence. With a lot of effort and a clothes pin on my nose, I can keep it from violating conservation of energy, but not without even more distasteful problems as a result.

You also have not explained why your model is justified in regarding the plate separations of your capacitors as significant enough to affect the resonance point, but at the same time be so far away as to be negligible for any other reason, like, the E-fields. I, mean, I think I know the reason, but I was more interested in one connected to the physics.

If my monitor shows 1.5 screenfulls of text, does it get bigger just because I display it? Or is it because I shrunk the fontsize and redefined a screenfull to be a standard value for which mine is 1.5 times the size? Same thing.

3039. WTB TU79

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: "R. Alfred Whiting" <gdwhiting@erols.com>
Message-ID: <8d49u8spi1@bob.news.rcn.net>
Source record: 61449

Wanted a Kenwood TU79 board for a Kenwood TR7950. Will accept board in nearly any condition. State price and condition.

Al K3BRS

3040. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: David Green <dgreen17@home.com>
Message-ID: <nMjJ4.2710$95.24715@news1.rdc1.mb.home.com>
Source record: 61450
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bill Beatty (aka Science Hobbyist) wrote:
> >
> > a very small radio antenna can intercept approximately
> > the same amount of energy as a dipole antenna which is
> > 1/pi wavelengths long....

Alan Boswell replied:

> . . . and you're saying this wasn't known 100 years ago?
> (does this qualify me as a flamer?)

I think he's saying that this is a surprising result which very few people are aware of. I personally noticed this phenomenon ten years ago when I was a grad student in Electrical Engineering, and surveyed half a dozen professors of antenna theory in my university. None of them knew this fact, and in fact most of them insisted that it couldn't possibly be true. For a while, I made a point of talking to professors at other universities about this phenomenon whenever I happened to be travelling, and I found more or less the same level of awareness whenever I went. Out of ten professors of electromagnetic theory, I didn't find a single one who agreed with Bill's statement as quoted above.

By the way, from Bilge's postings, I can't figure out whether he agrees or disagrees with Science Hobbyist's basic claim.

Martin Green

3041. F.S.2-meter HB amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Wayne Strickland <w9bbb@megsinet.net>
Message-ID: <38F5CE19.FFE4AE65@megsinet.net>
Source record: 61451

Hi,I've got a H.B 2-meter amp.Uses a RCA 829b Tube.Drv req 2-10 watts
and outputs about 60 watts on FM.More on SSB.Has a multi-function meter
and a pwr sw,also a stby sw.$100.00 For more equipment see
<http://www.megsinet.net/w9bbb>

3042. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38F5EA69.FF496B46@eznec.com>
Source record: 61452
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

David Green wrote:
>
> Bill Beatty (aka Science Hobbyist) wrote:
> > >
> > > a very small radio antenna can intercept approximately
> > > the same amount of energy as a dipole antenna which is
> > > 1/pi wavelengths long....
>
> Alan Boswell replied:
>
> > . . . and you're saying this wasn't known 100 years ago?
> > (does this qualify me as a flamer?)
>
> I think he's saying that this is a surprising result which very few people are
> aware of. I personally noticed this phenomenon ten years ago
> when I was a grad student in Electrical Engineering, and surveyed
> half a dozen professors of antenna theory in my university. None
> of them knew this fact, and in fact most of them insisted that it
> couldn't possibly be true. For a while, I made a point of talking
> to professors at other universities about this phenomenon whenever
> I happened to be travelling, and I found more or less the same
> level of awareness whenever I went. Out of ten professors
> of electromagnetic theory, I didn't find a single one who agreed
> with Bill's statement as quoted above.
> . . .

That's amazing, since it's clearly explained in even the first edition of Kraus' _Antennas_, by far the most widely read basic antenna text. And it was published in 1950. In their classic work on antenna ground systems, "Ground Systems as a Factor in Antenna Efficiency" (IRE, 1937), Brown, Lewis, and Epstein do a simple derivation and conclude "Thus an antenna of infinitesimal length, subject to no losses, yields a field strength which is only 4.25 per cent less than the field from a quater-wave antenna." Surely this derivation has been prominent in just about every text published for the last century or so.

I thought it was just me who had professors who had their heads where the sun don't shine. (Although I have to say, my electromagnetics professors, Carl T.A. Johnk and Leonard Lewin, were among the absolute best.)

Roy Lewallen, W7EL

3043. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: CA <remove_sm6pxj@hotmail.com>
Message-ID: <dNnJ4.4160$uJ1.12021@nntpserver.swip.net>
Source record: 61453

http://www.intio.or.jp/jf10zl/ (a must see)
http://hem.passagen.se/sm0vpo/ (Harry's homebrew homepage, SM0VPO)
http://gvozdev.ufn.ru/homebrew.html (RU3AEP homebrew page)

73
Christer
sm6pxj

3044. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <JDinW3BrSh94Ewgw@jmwa.demon.co.uk>
Source record: 61454
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

<38F57FAC.94250FFE@nospam.gecm.com>, Alan Boswell
<alan.boswell@nospam.gecm.com> inimitably wrote:
>
>
>Science Hobbyist wrote:
>>
>> a very small radio antenna can intercept approximately
>> the same amount of energy as a dipole antenna which is
>> 1/pi wavelengths long. To create this effect, make the
>> small antenna be part of a resonant circuit. For example,
>> to make a small loop antenna act "large", put a variable
>> capacitor across it, then tune it to resonate at the frequency
>> that you're trying to receive. Or, to make a tiny dipole
>> "suck in" more EM energy, put a variable inductor across
>> it and tune it to resonance. If the Q of the resonator is
>> high, the effect is much larger.
>
>
>
> . . . and you're saying this wasn't known 100 years ago?
> (does this qualify me as a flamer?)

It was, but quite a few people DIDN'T know it before this thread
started. It's the same as Transient Intermodulation Distortion (TID) in
audio amplifiers. Matti Otala was flamed something rotten for 're-
discovering' it by the people who already knew about it. BUT, many
amplifier designers DIDN'T know about: that's why Otala was able to show
that some quite well-known amplifiers suffered from it. I only found out
about it one year before Otala first published in English. But it's
obvious once you 'see' it.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

3045. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <Mj+me4BZUh94Ewit@jmwa.demon.co.uk>
Source record: 61455
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

<nMjJ4.2710$95.24715@news1.rdc1.mb.home.com>, David Green
<dgreen17@home.com> inimitably wrote:
>By the way, from Bilge's postings, I can't figure out whether he
>agrees or disagrees with Science Hobbyist's basic claim.

AIUI, he says it's well-known, but seems to have his own explanation,
one which might be equally controversial.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

3046. Help Me Find This Homebrew Article -

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Donald R Montgomery <donrm@sr.hp.com>
Message-ID: <8d56vg$lk7$1@nirvana.sr.hp.com>
Source record: 61456

I'm looking for help steering me to an article I saw
for a solid state synchroscope as used for synchronizing
two alternators - only instead of the usual two lite
bulbs, this one utilized a crystal oscillator comparing
60 Hz emergency alternator power and displaying it on
LEDs arranged in a circle that rotated with phase dif-
ference.

I could design my own but why do that when I can use
ideas from another working unit?

I've searched the yearly index for Ham Radio and Com-
munications Quarterly in addition to keyword search
on the ARRL member site. Not recalling the name of
the article complicates things considerably.

Anyone come across it and remember where I saw it?

TIA and 73
Don K6LTS
donrm@sr.hp.com

3047. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fcbp8.efa.root@radioactivex.lebesque-al.net>
Source record: 61457
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate said some stuff about

>audio amplifiers. Matti Otala was flamed something rotten for 're-
>discovering' it by the people who already knew about it. BUT, many
>amplifier designers DIDN'T know about: that's why Otala was able to show
>that some quite well-known amplifiers suffered from it. I only found out
>about it one year before Otala first published in English. But it's
>obvious once you 'see' it.

I haven't heard that name in a long time. I own one of the
original electrocompaniet 20 Watt amps. I'm lucky if people
that sell stereo equipment know what it is, much less who
designed it. Not only is it nice amp, it doesnt catch fire
driving quads.

3048. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fcd7r.efa.root@radioactivex.lebesque-al.net>
Source record: 61458
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate said some stuff about

>
>AIUI, he says it's well-known, but seems to have his own explanation,
>one which might be equally controversial.

Not unless there is anything controversial about the way any
antenna works. Radiation lands on them, providing the right
boundary conditions lets the energy roll out of the antenna
go to work.

3049. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8d5hn9$gd2$1@nnrp1.deja.com>
Source record: 61459
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In article <38F5800C.B763F2A5@nospam.gecm.com>,
Alan Boswell <alan.boswell@nospam.gecm.com> wrote:
> . . . and you're saying this wasn't known 100 years ago?
> (does this qualify me as a flamer?)

No, in my book "flamers" are those who commonly use
namecalling, ridicule, and even outright lying as debating
tricks.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

3050. Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Derek Toeppen <derekt@rosalie.col.hp.com>
Message-ID: <8d4t9ths1@nonews.col.hp.com>
Source record: 61460

I am looking for the names of a few low cost manufactures of
double sided, low volume PCB's. Any recommendations?

Thanks

Derek Toeppen
WA0ZTI
derek_toeppen@agilent.com

3051. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Science Hobbyist <bbeaty@microscan.com>
Message-ID: <8d5jqtioc1@nnrp1.deja.com>
Source record: 61461
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

In article <38F5EA69.FF496B46@eznec.com>,
Roy Lewallen <w7el@eznec.com> wrote:

> That's amazing, since it's clearly explained in even the first edition
> of Kraus' _Antennas_, by far the most widely read basic antenna text.
> And it was published in 1950. In their classic work on antenna ground
> systems, "Ground Systems as a Factor in Antenna Efficiency" (IRE,
1937),
> Brown, Lewis, and Epstein do a simple derivation and conclude "Thus an
> antenna of infinitesimal length, subject to no losses, yields a field
> strength which is only 4.25 per cent less than the field from a
> quater-wave antenna." Surely this derivation has been prominent in
just
> about every text published for the last century or so.

And yet a good number of the responses here and on the
other newsgroups were along the lines of "let's disprove
this obvious crackpotism."

One aspect of the phenomenon is that, in the case of a
transmitter, it's obvious that we can easily adjust the
volts/current of the drive signal to crank up the strength
of the tiny antenna's fields, and make the antenna act
"large." Give a loop antenna a large current, or give
a short dipole a large voltage. If the field strength
at 1/2-wavelength distance is just as strong as that of
a larger antenna, it makes sense that a small lossless
antenna would transmit just as well as a large one. But
when the same is done with a receiving antenn, so that
the tiny antenna generates enormous local fields and
"sucks energy" from surrounding space, many people refuse
to believe it.

As others pointed out to me, reciprocity considerations
should convince us that this can occur for reception just
as it occurs for transmission. Even so, the very nature
of the "energy sucking" effect seem to anger some people.
I don't really understand why.

--
((((((((((((((((((((((((O)))))))))))))))))))))))
William Beaty bbeaty@microscan.com
Software Engineer http://www.microscan.com
Microscan Inc., Renton, WA 425-226-5700 x1135

Sent via Deja.com http://www.deja.com/
Before you buy.

3052. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8d5ii8$t23$1@uranium.btinternet.com>
Source record: 61462
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Roy said -
> Brown, Lewis, and Epstein do a simple derivation and conclude "Thus
an
> antenna of infinitesimal length, subject to no losses, yields a
field
> strength which is only 4.25 per cent less than the field from a
> quater-wave antenna."
==========
Roy, you've been extolling the virtues of B,L & E to me for ages.
Unjustly accusing me of differing with their (unspecified)
conclusions.

If that's the best conclusion they could come to after all their
theoretical and practical research, then I wonder who paid their wages
and who they were plagiarising ? It doesn't give me much confidence
in their other conclusions - whatever they were.

It was quite obvious to workers 30 or more years before BLE, a
loss-less antenna lays down a field strength, referred to a standard,
which depends entirely on its radiation pattern in the horizontal and
vertical planes. The 4.25 percent is merely the difference along the
horizontal between a 1/4-wave vertical and a very short vertical
antenna. (Incidentally, the gain along the horizontal is a maximum
with a 5/8-wave antenna. MF broadcasters depend on such facts.)

Unfortunately Eznec cannot be used to check this point because she
always reports radiation along the horizontal to be zero - regardless
of the antenna configuration or ground conditions.

Reg, G4FGQ

3053. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: n1bug@mint.net
Message-ID: <38f6554d.5472946@news.mint.net>
Source record: 61463

Thanks everyone. I'm running a few days behind on getting stuff added,
but I'm plugging away at it and sure appreciate the suggested sites!!

Paul

n1bug@mint.net (Paul Kelley) wrote:

>Howdy folks,
>
>I have volunteered to edit the Amateur Radio: Homebrew category
>(http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
>Directory Project (http:/www.domz.org/). If you take a look at the
>current listings you will see this category needs some additions!
>
>If you have or know of a web site that has information on ham radio
>homebrew, PLEASE send me the URL for review! I am primarily looking
>for web sites offering project plans/schematics, but will list others
>if they pertain directly to home construction of ham radio equipment.
>
>Thanks...
>
>Paul N1BUG

3054. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <38F6784F.CE4BFB2@valley.net>
Source record: 61464

"Ed W." wrote:

> Is there a reliable way to strip #30, double E, and single E, stranded
> teflon wire without nicking and breaking any of the
> conductors?.....

Hello--

Believe it or not, you can use a manual wire stripper. There are two styles--
one made by J. W. Miller and countless offshore imitators that looks like two
flat blades with mating notches in the jaws. The secret is to grasp the wire
in the jaws and apply just enough force to "crunch" the insulation. Then, you can
pull off the insulation with your fingernails.The process is hard to describe, and it
takes a little practice to get the "feel" of the tool you're using.

Some of the imported tools are junk-- avoid any with lateral wobble in the jaws.

Also, General Cement (GC) manufactured a more-complicated stripper that
uses flat, notched jaws to grab the wire and sever the insulation. The notches
are calibrated by wire gauge, and you need two tools to handle the range
AWG#14 to AWG #28. I don't know whether this tool is still made, or what it

was called.

Finally, there are thermal-stripping tools that look a little like giant tweezers
with small electrodes running across the jaws' faces. You press a foot pedal,
the electrodes heat red hot, and you grab the Teflon wire and twist--
again, this
is easier done than described. Not too much Teflon gets vaporized, but good

ventilation is recommended.

After using various kinds of wire, I prefer Teflon insulation, with irradiated PVC
(105C-rated; also called IPVC) a distant second. Regular PVC turns to mush
and smells almost as bad as overheated Teflon.

73,
Brad AA1IP

3055. Re: Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Paul Breed <Paul@Netburner.com>
Message-ID: <38F68750.77927D5F@Netburner.com>
Source record: 61465

> I am looking for the names of a few low cost manufactures of
> double sided, low volume PCB's. Any recommendations?
>

I've had a good experience with www.smthcircuits.bc.ca

Paul (Kl7JG)

Paul Breed Chief Architect, NetBurner
Networking in one day.
http://www.netburner.com

3056. FA: Beautiful Johnson 6n2 Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <MDyJ4.207$U3.14937@newsfeed.avtel.net>
Source record: 61466
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

see it at: http://www.electronbay.com/lot.cfm?lotID=138

3057. FA: Rare 1937 Allied Radio Catalog

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: Mike <mike14@west.net>
Message-ID: <eFyJ4.208$U3.14925@newsfeed.avtel.net>
Source record: 61467
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

see it at: http://www.electronbay.com/lot.cfm?lotID=135

3058. FS: Ceramic coil form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <E68J4.22110$2D6.657303@news20.bellglobal.com>
Source record: 61640

Never used ceramic coil form, ID 2" Outer dia about 2.5" Length 5". It has the groves to hold up to 12 to 14 guage wire. Its available for $ 15.00 including shipping CONUS. John

3059. FS: Soliconix RF Transistors (Pair)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <iY9J4.22720$2D6.672612@news20.bellglobal.com>
Source record: 61641

For sale, never used never taken out of plastic packaging.
Siliconix RF transistors (2) DV 2840S
$ 10.00 plus 2.00 for shipping.
john

3060. FS: Class C Amplifier Circuit board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <u%9J4.22742$2D6.672760@news20.bellglobal.com>
Source record: 61642

This is a brand new, still in plastic wrapping printed circuit board. This was made by Circuit Board Specialists. Printed on the PC board is " Class C Power Amplifier" I believe this was for a 2 meter amp, but it also could be for a small HF amp for use with the HW-7/8/9 series.
$ 5.00 plus $ 1.50 shipping.John

3061. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fabrn.b5d.root@radioactivex.lebesque-al.net>
Source record: 61643
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

John Fields said some stuff about
>
>What idea?
>

Briefly, and without rhetoric, the claim was that adding passive components to a small antenna so that it resonates at the frequency of interest will cause it "pull in" radiation that otherwise would not fall on the antenna. This must be distictly contrasted from the case that the radiation strikes the antenna regardless and that any added components can only optimize the power transferred from the antenna through the commonly available tools of halliday & resnick level physics. It's not that only three people grasp the idea. It's that of those that do, only three have considered supporting some aspect of it. I don't happen to be among them. The confusion is in part due to the legitimate point of view that one may take by defining everything in terms of a standard efficiency, size and directionality (e.g., isotropic) and quoting an equivalent antenna geometry in terms of a standard. The "energy sucking" amounts to choosing the normalization to unity backwards and attributing the additional signal to a real effect.

3062. Re: Determining Trap Resonance with MFJ 259B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-13 00:00:00 UTC
From: John DeGood <nu3e@arrl.net>
Message-ID: <oDaJ4.58266$S4.394658@news1.rdc1.nj.home.com>
Source record: 61644

You can easily build your own dip adapter for the MFJ analyzer: it consists of just 2 resistors, 1 capacitor, and a 3 turn coil. Complete construction and usage instructions appeared in the Nov 93 QST, pp 45-46. Email me if you can't easily locate a copy.

Construction details of my attic-mounted 6-band trap dipole are at:

http://www.nerc.com/~jdegood/coaxtrap

73,

John NU3E

"Gary Ferdinand" <gferdinand@ipass.net> wrote in message news:rgRI4.177$xO4.790@saturn.ipass.net...
> Anyone have experience using an MFJ 259B analyzer to determine the resonant
> frequency of a coaxial trap?

3063. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: David Green <dgreen17@home.com>
Message-ID: <4TtJ4.2833$95.28590@news1.rdc1.mb.home.com>
Source record: 61468
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge gave the following brief description of how antennas work:
>
>
> Not unless there is anything controversial about the way any
> antenna works. Radiation lands on them, providing the right
> boundary conditions lets the energy roll out of the antenna
> go to work.
>

I don't think this is a good way to think about antennas. He makes
it sound like the energy available to do work depends on the
physical cross-sectional area of the antenna. I wonder if this
is what he believes? The point raised by Science Hobbyist is,
of course, that antennas don't behave this way.

Martin Green

3064. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Woody White <woody.white@att.net>
Message-ID: <38F66E5C.DFF589F3@att.net>
Source record: 61469

Assuming you only want to clean the end for connection...

Some enameled (painted) wire uses material which will
decompose at soldering temperatures, others, not so much.
If you have the type that will decompose, touch your
soldering iron (~700 degrees F) to the exposed end of the
cut wire and apply a little solder/flux. Move the iron down
the wire as it heats (and the insulation decomposes) adding
solder/flux.
Woody

VR2RD wrote:
>
> Hi,
>
> Can anyone tell me how to reomove paints on fine copper wire. I used a
> knife and the wire broke.
>
> 73
> VR2RD

--

NEW web site format!.....NEW site
address!

Ham Homebrew/ATV Circuits...Scanning Electron Microscope
Images

http://woody.white.home.att.net ...de Woody,
WB4QXE

3065. Re: WTB: 5 Volt 30 Amp Transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Woody White <woody.white@att.net>
Message-ID: <38F66FB5.C1919109@att.net>
Source record: 61470

4-400 amp, huh? I ended up taking apart an old transformer
and rewinding the secondary to provide the right output when
I built mine. If you cna't find the chimney, I have heard of
people using teflon tube ($$$, but easy) or cutting the
bottom out of a pyrex beaker.
Woody

Lrbety wrote:
>
> Want to buy 5 volt 30 amp transformer for pair of 4-400A.
>
> Please email direct.
>
> David Beard
> WA4QGA
> lrbety@aol.com

--

NEW web site format!.....NEW site
address!

Ham Homebrew/ATV Circuits...Scanning Electron Microscope
Images

http://woody.white.home.att.net ...de Woody,
WB4QXE

3066. Re: Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: quatsein@island.net
Message-ID: <38f6634b.773678032@news.cr.island.net>
Source record: 61471

Alberta Printed Circuits.

Steve Carlisle

On 13 Apr 2000 16:40:29 GMT, Derek Toeppen <derekt@rosalie.col.hp.com>
wrote:

>I am looking for the names of a few low cost manufactures of
>double sided, low volume PCB's. Any recommendations?
>
> Thanks
>
> Derek Toeppen
> WA0ZTI
> derek_toeppen@agilent.com

3067. FS: Heathkit SB-104A w/PS - needs work

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Christopher An <christopher_an@sympatico.ca>
Message-ID: <38F69F49.F63EA26A@sympatico.ca>
Source record: 61472
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,rec.radio.amateur.equipment

Hi,
I have a Heatkit SB-104A HF transceiver for sale. It needs work!
I tested it with a signal generator and it receives strong signals like S9+++, but the audio is very weak and I can't hardly hear any weaker signals. I tested same thing with on air signal, and I can barely hear S9+++ signals only. The frequency display is totally blank.
Physical shape is very good. The front is excellent and the top and bottom cover has some minor scratches. All knobs are original and in excellent condition. There are some signs of repair (or modification) attempt. No noise blanker or optional filter. It is clean inside, and all works seem to have been done properly. There is a callsign (Canadian callsign) on the display. I checked the meter and it works fine. There is no missing parts, but I took out some ICs from a board and did not put them back.
If anyone looks for a nice project, this can be yours. I don't have any expertise nor time to work on this radio. I got this from local fleamarket as a working condition radio, but it did not work when I turned it at home. I don't remember the seller, so I have to take the loss.
My price is $135 plus $15 for shipping anywhere in Canada or Con. US. The power supply is pretty heavy and the actual shipping must be around $35~45.
The power supply is HP-1144 and powering off from the radio turns off the power supply as well. Power supply is in very good condition, and works great.
I believe my pricing is reasonable, but you can fix it if you think I was wrong. I think the power supply itself has about $60 (or more because it is 20A PS) value and the radio is about $75 as a part radio.
I will ship it by UPS with proper packaging. Payment can be made by personal check, money order, or certified check (cashier's check in US).

Thank you for reading this long for-sale posting and 73,

Christopher VE3UVT

3068. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <PAxJ4.3981$w33.113208@typhoon2.gnilink.net>
Source record: 61473

Bob:
Yea, I'll bet? I was told that the gas eminated is "Fluorine", pretty corrosive and toxic stuff?
I have a simple pair of "Miller" sissor-action stripping tool, but somehow keep nicking one or more strands which seems too much to sacrifice? I am having some success by "smashing" the end of the teflon with a pair of "duck-bill" pliers and then carefully cutting "behind" the flattened tip region with a razor blade? After that, I grab the flattened portion of teflon with a pair of serrated, needle nose pliers and pull? It is not foolproof, but seemingly better than the reg. stripper. I probably need a new pair of strippers also? A guy was demonstrating a pair of automatic strippers at the last hamfest, but I didn't have a sample of #30 TFE with me? The next time, I will. TFE has a nice glossy, translucent appearance for my particular application or else I would switch to something other?
TNX , Bob and Brad,... Ed W. K3FDY

Bob wrote in message ...
>The most reliable way is with a heat stripper. Unfortunately, the fumes
>from teflon are extremely toxic and you must find a way to avoid breathing
>even the least bit of it. I did that once and thought I was going to die.
>
>I red hot wire will melt the teflon away from the conductor.
>
>73, Bob K6DDX
>
>

3069. FS: Two 3 MFD @ 6KV caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: wabate@erols.com
Message-ID: <38f7acf3.29015902@news.erols.com>
Source record: 61474

I have two filter caps for sale. These are very heavy. They are
14X14X6. They are in good condition. Just ran them on my 4KV supply.
You don't want to ship these caps! I am near Philadephia.
Price: $20 for both.

73,
Bill Abate, K3PGB
wabate@erols.com

3070. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fdhm2.f36.root@radioactivex.lebesque-al.net>
Source record: 61475
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

David Green said some stuff about

>I don't think this is a good way to think about antennas. He makes
>it sound like the energy available to do work depends on the
>physical cross-sectional area of the antenna. I wonder if this
>is what he believes? The point raised by Science Hobbyist is,
>of course, that antennas don't behave this way.
>

What else would it depend upon? You certainly cant have MORE average
energy available than the flux in the solid angle your antenna subtends,
and it isn't any less silly to think there is less flux than there would
be through the same area if the antenna wasn't there. You certainly
cant expect the radiation to notice the antenna way off in the distance
and tell the source to alter the angular distribution of the radiation.
(we ARE dealing with radiation fields here - so the antenna isn't coupled
to the source through capacitance or a wire -- the usual conditions).
The next step would be to add in the fact that you have to deal with a
probability distribution rather than simple rays, but that also lends
itself to a symmetry argument when considering the time averaged flux.

What exactly happened to invalidate conservation of energy or
gauss' law? If I draw a sphere centered on the source, up until
some any radiation is absorbed, how can the angluar distribution
of the radiated flux change just by going to larger r?

Regardless of whether this is a good way to view an antenna for most
of the characteristics one might want to know, if one may apply this
point of view to avoid calculating something, the the wrong way to
look at the problem is the way that requires a calculation. I would
find it rather bizarre if someone were to argue that the answer calculated
from a number of numerical approximations and idealized behavior was better
than simply recognizing the calculation would be pointless. I didn't
simply memorize a collection of facts as I strolled through the physics
material. Why should I waste a perfectly good method of solving a
problem just because other people choose to do it the hard way? In
the case of the "energy sucking", I think it not only reduced the problem
to one of simple geometry, the fact that the geometric dependence
is a nice physical reason, that it beats the hell out of the claims
for the existence of "ebergy sucking" based upon some uninvestigated
speculation about the "near-field" of the antenna "reaching out" for
additional radiation and physical violations that needed to support it.

I didn't see anyone argue that the presence of an antenna
invalidates the 1/r^2 falloff of the radiated power, so I cant

see why there would be an issue.

3071. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fds77.f36.root@radioactivex.lebesque-al.net>
Source record: 61476
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Science Hobbyist said some stuff about
Re: Energy sucking is blatent self-promotion!! to usenet:
>In article <38F5EA69.FF496B46@eznec.com>,
> Roy Lewallen <w7el@eznec.com> wrote:

>> strength which is only 4.25 per cent less than the field from a
>> quater-wave antenna." Surely this derivation has been prominent in
>just
>> about every text published for the last century or so.
>
> And yet a good number of the responses here and on the
> other newsgroups were along the lines of "let's disprove
> this obvious crackpotism."
>

That's odd. I thought the "energu sucking" was the target of all
the remarks concerning "obvious crackpotis". I dont see any
similarities that would allow you skate in behind anything
legitimate. It would appear that in the first case, the authors
took limitating cases of the mathematics to show that so long
as the criteria were met, this is what is expected. That is quite
a bit different from invennting a phenomenon for which the sole
evidence of its existence hsppens to be your claim that it does
snd connecting the unsubstantiated evidence to the invented
phennomenon through a theory that has no precise meaning beyond
handwaving arguments that violate conventional physics, while
adding nothing. Doesn't it seem odd that there was no inconsistency
until you "fixed" a problem that wasn't "broken"?

Your theory isn't even up to the level of a consistent hunch in
search of a problem to speculate about.

> transmitter, it's obvious that we can easily adjust the
> volts/current of the drive signal to crank up the strength
> of the tiny antenna's fields, and make the antenna act

If it's so obvious, that this makes sense, much less is
true, then illuminate me. If this is a receiving antenna,
I fail to see what you are cranking up and if it's a
transmitting antenna, your conclusion about "large"
doesn't follow from the obvious increase in power output.

Since when does physical size have any fundamental relationship
to the total radiated power? Power is measured in J/s
sizes are in meters. The only connection occurs when one

defins something like an X-watt antenna to be a legnth
of 1 meter. Then by your definition, a 2X watt antenna is
bigger.

I'm sorry, but your implicit definitions of personilzed standard
units of measure have not been elevated to the status of a physical
phenomenon.

> "large." Give a loop antenna a large current, or give
> a short dipole a large voltage. If the field strength
> at 1/2-wavelength distance is just as strong as that of

What happened to the numerical results from even the simple
model that was supposed to make some part of this plausible?

> a larger antenna, it makes sense that a small lossless
> antenna would transmit just as well as a large one. But
> when the same is done with a receiving antenn, so that
> the tiny antenna generates enormous local fields and

There is no way any of this makes sense via a logical
progression through the premises. If you get the right
answer (.e.g., increase rather than decrease) it's by
the sheer luck of having a 50-50 chance. Try the results
of a random walk instead of what you seem to think is a
logical conclusion that lead you the "energy sucking".
So long as the random number generator wasn't constructed
with equally fallacious assumptions, it'll get the right
answer 50% of the tim, too.

> "sucks energy" from surrounding space, many people refuse
> to believe it.

Well, failing to adresss one or two bazillion inconsistencies
over the last two months or so is beginning to strain your
credibility. Now, it might be difficult to understand why
"Because, it does", just doesnt elimiate any room for doubt,
but some people just think no evidence + no need + the
working theory it blows out of the water adds up to prefering
something more substantial than your proclimation on a stone
tablet.

> As others pointed out to me, reciprocity considerations
> should convince us that this can occur for reception just
> as it occurs for transmission. Even so, the very nature
> of the "energy sucking" effect seem to anger some people.
> I don't really understand why.

Because your idea of reciprocity involves first finding the
recipricol and then inverting the noralization. This is just
a guess, but probably a safe one, that in normalizing to
a standard value, such that e.g., one replaces a radiation
pattern that is isotropic, that they don't also refer to

the isotropic value as equal to the lowest value in the
in the original non-isotropic pattern by invoking conservation
of energy and the calling the large lobe an enhancement from
something inexplicable.

You deliberately start from a poor efficiency and call it unity.
How is recirpocity involved if you never consider the fact
that you scaled the energy to start with and called the outcome
absolute without ever inverting the scale?

Early on, this like any other question was perfectlly understandable
as a misconception, even through attempts to prove the misconception
wasn't yours. After failing to address any inconsistency between
your idea and reality with anything you forestalled an immediate
end to this crackpot scheme with a superfluous "flame" tangent.
I mean really. When referring to someone that has done the
the equivalent of holding their breath until they turn blue as
a means of repeating the "energy sulking" mantra and avoiding
it's lack of soundness, you have to really be out to lunch if
you think, of all places, usenet is an improper place to not be
polittically correct or provide the appropriate abuse. Call it
flaming, whatever. Save "high road" moralistic musings for for a
wine and cheese party. Either put up, shut up or live with you
choice to do neither. If you want politically correct abuse,
see if there's an alt.miss.manners.

3072. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F710F8.F113511E@xprint.ca>
Source record: 61477
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:

> What else would it depend upon? You certainly cant have MORE average
> energy available than the flux in the solid angle your antenna subtends,
> and it isn't any less silly to think there is less flux than there would
> be through the same area if the antenna wasn't there. You certainly
> cant expect the radiation to notice the antenna way off in the distance
> and tell the source to alter the angular distribution of the radiation.
> (we ARE dealing with radiation fields here - so the antenna isn't coupled
> to the source through capacitance or a wire -- the usual conditions).
> The next step would be to add in the fact that you have to deal with a
> probability distribution rather than simple rays, but that also lends
> itself to a symmetry argument when considering the time averaged flux.
>
> [snip]

This is true of horn type antennas, but wire antennas generally capture more energy than is incident on their physical structures. For example, Balanis shows in his "Antenna Theory Analysis and Design" (p.84) that the maximum effective area of a short dipole is 0.119 x lambda^2. He goes on to show that for a dipole whose length is lambda/50 that the maximum theoretical effective area turns out to be 5.95 x lambda, over 1700 times the actual area of the antenna.

I would hesitate to call this "energy sucking" but it does show the effect an antenna has on the surrounding space. Of course, a spherical array of dipoles covering the entire area of 4pi x r^2 will interact with each other such that no more energy is received than is transmitted, but an isolated antenna appears to get more than its "fair share".

J.Legris
change the x to s to reply

3073. Re: I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38F72F70.1766@ixpres.com>
Source record: 61478

the numbers of interested folks are dropping off.
>
> What a great idea! Now if only I could get folks interested in
> building "stuff" around here!
>
> I have enjoyed 19 years of building so far, and look forward to many
> more. To me it's (in most cases) more fun than getting on the air to
> use the stuff I've built....
> 73,
> Paul N1BUG

Paul OM,

I heartily agree, except I also enjoy operating with my own gear just as much as building it!
It has been my observation over my 45 years of hamming that folks are either interested in and have the internal motivation for building and tinkering, or they do not. If not, no amount of hand-holding, cajoling, or whatever will get them interested/motivated. I think we are living today in a Golden Age for ham radio homebrewing. Never has it been easier, or cheaper, to build great gear. There is a lot of homebrewing going on, and not just by the QRP boys. Now, hardly any mechanical work is required either. I've been having a ball the last few years. Yet now, (as before, at least postwar) builders are in the minority of hams. So it is not the opportunity that is lacking in most cases. It is lack of technical interest, that's all. If you're really interested, you will find the information and resources to pursue it. As the old saying goes, "..you can lead a horse to water, but you can't make him drink".
This is a great time to be a ham if you enjoy building.

Happy homebrewing!

73,
Don, W6JL

3074. Re: I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38F736DB.5893C567@bright.net>
Source record: 61479

I second that.
Paul N8ULS

Don W6JL wrote:

> the numbers of interested folks are dropping off.
> >
> > What a great idea! Now if only I could get folks interested in
> > building "stuff" around here!
> >
> > I have enjoyed 19 years of building so far, and look forward to many
> > more. To me it's (in most cases) more fun than getting on the air to
> > use the stuff I've built....
> > 73,
> > Paul N1BUG
>
> Paul OM,
>
> I heartily agree, except I also enjoy operating with my own gear just
> as much as building it!
> It has been my observation over my 45 years of hamming that folks are
> either interested in and have the internal motivation for building and
> tinkering, or they do not. If not, no amount of hand-holding, cajoling,
> or whatever will get them interested/motivated. I think we are living
> today in a Golden Age for ham radio homebrewing. Never has it been
> easier, or cheaper, to build great gear. There is a lot of homebrewing
> going on, and not just by the QRP boys. Now, hardly any mechanical work
> is required either. I've been having a ball the last few years. Yet
> now, (as before, at least postwar) builders are in the minority of
> hams. So it is not the opportunity that is lacking in most cases. It
> is lack of technical interest, that's all. If you're really interested,
> you will find the information and resources to pursue it. As the old
> saying goes, "..you can lead a horse to water, but you can't make him
> drink".
> This is a great time to be a ham if you enjoy building.
>
> Happy homebrewing!
>
> 73,
> Don, W6JL

3075. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fee8e.f36.root@radioactivex.lebesque-al.net>
Source record: 61480
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>This is true of horn type antennas, but wire antennas
>generally capture more energy than is incident on their
>physical structures. For example, Balanis shows in his
>"Antenna Theory Analysis and Design" (p.84) that the maximum
>effective area of a short dipole is 0.119 x lambda^2. He
>goes on to show that for a dipole whose length is lambda/50
>that the maximum theoretical effective area turns out to be
>5.95 x lambda, over 1700 times the actual area of the
>antenna.
>

I'm having a bit of difficulty drawing the same conclusion from
just that information, since I don't see how the effective area,
the real area and an absolute power would be related without
presuming a few things. For example, one immediate change
(I would say reduction, but that isnt clear eaither) is that
this probably has the directivity factored in. That would
produce a 1.5x to 2x reduction, since the best I have been
able to deteermine is that the directivey enhacement is
basically from takining the point in the radiation pattern
that's the largest and then basing the enhancement on taking
that to represent an isotropic source rather than taking the
average radiated power. So, before I can say much, I need to
find the derivation to see what was the normalization.

Since a short dipole is also fatter, in general, do they
consider that in the above or is the factor of 50 in length
the only consideration? That would be misleading if a
50m, 20awg wire was quoted as having a 50 fold difference
in effective area from a 1m x 2cm piece of tubing.

Once I locate the entire derivation, I'll be better able to
comment.

3076. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F76B3C.CEA118BD@xprint.ca>
Source record: 61481
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
>
> I'm having a bit of difficulty drawing the same conclusion from
> just that information, since I don't see how the effective area,
> the real area and an absolute power would be related without
> presuming a few things.
[snip]

Those figures were just a specific theoretical example given
by Balanis. The point is, as he states:

"Thus the wire antenna can capture much more power than is
intercepted by its physical size! This should not come as a
surprise. If the wire antenna would only capture the power
incident on its physical size, it would be almost useless."

J.Legris
change the x to s to reply

3077. need ramsey PA-20 220 20W amp schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Fred <fdecker@compuserve.com>
Message-ID: <8d7tto$3m4$3@ssauraaa-i-1.production.compuserve.com>
Source record: 61482

Does anyone have one of these or access to the manual? I would really appreciate a scan or fax of it, thanks! Email is best, but I can put the fax on if you let me know when you will call, thanks.

--
Fred
N4IXL
ICQ:10254840
http://members.aol.com/fdecker

3078. Europeen repeaters list

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: F6GKD <f6gkd@wanadoo.fr>
Message-ID: <8d7ura$2d2$1@wanadoo.fr>
Source record: 61483

http://www.ref.tm.fr/cnrr/

3079. Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Gansel <Gansel@mcn.net>
Message-ID: <sffgafb3ivv25@corp.supernews.com>
Source record: 61484

I am looking for some resistors that will handle 40 amps at .405 ohms. Does anyone know where I could even begin looking for such a thing? I'm trying to duplicate a battery discharger that will discharge a 28vdc battery at a certain rate.

Thanks
Todd
KC5YED/7

3080. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-14 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F7D6EF.A04C9E9E@xprint.ca>
Source record: 61485
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Reg Edwards wrote:
>
> What a set of ninnies you are. Why not insert some numbers into the
> simple equations, including antenna radiation resistance and the
> matched receiver input resistance (for maximum receiver input volts),
> and the whole thing will become crystal clear - on both transmit and
> receive.
>
> Even Marconi understood such matters.

Which simple equations do you have in mind?

J.Legris
change the x to s to reply

3081. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Larry Gauthier <larryg_AT_ismi.net>
Message-ID: <38f856fd@news.ismi.net>
Source record: 61395

Todd:

I had to do something similar once, and needed a DC dummy load (but for a 13.8 volt system). I ended up using a parallel string of discontinued automotive headlamps that I bought cheap from a local auto parts store (they were happy to get rid of them; I was happy to get them). By wiring both the standard and high beam filaments, I had a pretty effective dummy load for high currents. You'd need to put them in series/parallel for 28 volts. This is NOT a constant current load, just a BIG resistor. If you need it to sink constant current, you could put some current limiting transistors in the path.

-larry
K8UT
"Gansel" <Gansel@mcn.net> wrote in message
news:sffgafb3ivv25@corp.supernews.com...
> I am looking for some resistors that will handle 40 amps at .405 ohms.
Does
> anyone know where I could even begin looking for such a thing? I'm trying
> to duplicate a battery discharger that will discharge a 28vdc battery at a
> certain rate.
>
> Thanks
> Todd
> KC5YED/7
>
>

3082. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <F3_J4.5475$1g2.21780@news02>
Source record: 61396

Do you need it all in one resistor ?
are you working with a large budget ?
Do you need a < 1% tolerance ?

If the answers are yes,yes,yes there are sources for this sort of thing, but prices will be in the >$4/watt region. There are a number of people who make >50 watt precision resistors Try http://www.vishay.com/docs/sp_pur_housd.pdf for a start. But they are going to be expensive !!!

If you are on a budget then probably the cheapest way to go would be an appropriate length of number 4 copper wire from Home Depot. The resistance of the wire will change as it heats up. It would be cheaper to monitor current through and voltage across the load than to buy a precision load.

Bob

"Gansel" <Gansel@mcn.net> wrote in message news:sffgafb3ivv25@corp.supernews.com...
> I am looking for some resistors that will handle 40 amps at .405 ohms. Does
> anyone know where I could even begin looking for such a thing? I'm trying
> to duplicate a battery discharger that will discharge a 28vdc battery at a
> certain rate.
>
> Thanks
> Todd
> KC5YED/7
>
>

3083. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <5RnLCqAw1D+4Ew$G@jmwa.demon.co.uk>
Source record: 61397
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

<slrn8fgatb.frc.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>mikegi said some stuff about
>
> >
> >Take a look at Schantz's em page, it has some interesting animations and
> >interpretations of em energy flow around dipoles. Here's a link:
>
>
> I'm going to have to take exception to several of his interpretations.

No change there, then. Is there *anyone* that you agree with?
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

3084. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F870D5.BA80280F@xprint.ca>
Source record: 61398
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
> Joseph Legris said some stuff about
>
> >Those figures were just a specific theoretical example given
> >by Balanis. The point is, as he states:
> >
> >"Thus the wire antenna can capture much more power than is
> >intercepted by its physical size! This should not come as a
> >surprise. If the wire antenna would only capture the power
> >incident on its physical size, it would be almost useless."
> >
>
> That's the part I don't believe follows from what you provided. The
> diameter of the dipole is never included as part of "effective size"
> If shortening the dipole by a factor of X increases the signal,
> the effective area is always X times larger regardless of how much
> it was simultaneously widened. The extra width is regarded a
> construction detail to obtain the right impedance. Simply because
> making such an approximation provides tractable mathematics + an
> empirical construction detail in an advantageous way to provide
> rules of thumb for engineering reasons doesn't fly here. I'm
> explicitly stating that detail is exactly the point.
[snip]

I am getting confused now. Several posts earlier in this
thread,

David Green wrote:
>>I don't think this is a good way to think about antennas. He
>>makes it sound like the energy available to do work depends on the
>>physical cross-sectional area of the antenna.

Bilge responded:
> What else would it depend upon? You certainly cant have MORE average
>energy available than the flux in the solid angle your antenna
>subtends, and it isn't any less silly to think there is less flux
>than there would be through the same area if the antenna wasn't there.

By "physical cross-sectional area of the antenna" I believe
that Green meant, at least in the case of a dipole, the
diameter of the wire multiplied by its total actual length.
Is that what you understood?

J.Legris
change the x to s to reply

3085. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <qJ_J4.346$yY1.7589@news.inreach.com>
Source record: 61399

Todd:

Your talking about over 600 watts. One possible way to do this is to use nichrome wire heating elements, like the ones used in electric heaters and clothes driers. The ones in clothes driers are rated at several thousand watts...you could cut the sections appart and parallel them to give the resistance you need. Use brass screws and washers/nuts to bolt them to ceramic insulators with crimped wire terminals (don't even think about soldering to them).

They are not too expensive and I have seen lots of them at surplus yards.

Roger K6XQ

Gansel <Gansel@mcn.net> wrote in message
news:sffgafb3ivv25@corp.supernews.com...
> I am looking for some resistors that will handle 40 amps at .405 ohms.
Does
> anyone know where I could even begin looking for such a thing? I'm trying
> to duplicate a battery discharger that will discharge a 28vdc battery at a
> certain rate.
>
> Thanks
> Todd
> KC5YED/7
>
>

3086. How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38f6c016.37417745@news.online.no>
Source record: 61400

A friend told me that his 6HF5's (Galaxy V mk2) lasted 18 years and were only down to 80% power. Suppose 6JB6 and 6JS6 last just as long provided you don't sit on the key when tuning.

wonder how long 6146B's will last in a transceiver for an active amateur, working at least a few QSO's every week and several contests on ssb or cw during the year? Mine has lasted 10 years, but I am not so active. Japanese transceivers includes a switch to disconnect heater voltage when one do not intend to transmit

Once suggested - as a joke - to QST Hints & Kinks, that great improvement could be achieved by installing a termometer in the PA compartment. I made several statements as to economical improvements and cost reductions (seems to be very important arguments in America) - just to underline the joke, but ARRL staff didn't understand that it was a joke, hi (maybe a great idea to do, but rather impractical to do)

73
Jan-Martin
LA8AK

3087. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fh592.hdj.root@radioactivex.lebesque-al.net>
Source record: 61401
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

John Woodgate said some stuff about
>
>No change there, then. Is there *anyone* that you agree with?

Anyone that convinces me they are correct. I don't see any reason to
agree if I think something is incorrect. Did you read the entire
post or just respond to the first line? If so, then by also reading the
pages on the website as I took the time to do, you could have decided
what it was I was commenting on and added additional commentary.
Why should I check a running total of agree/disagree posts to see if
I'm politically correct? If you are suggesting any disagreement is
invalid, I'm not holdiing you back from providing a point by point
post of every erroneous statement. If you are certain something is
wrong, it should be very easy to nail down exactly what that is.
If not, then it's a little harder to see how you would be able to
say one way or another. I went to the effort to read the material.
After reading it, I had an opinion. Did you read it or just form the
opinion based upon the person posting?

3088. FS: 220 MHz linear power modules type M67712 30 W out for 300mW in

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Bryan Fields <kb9mci@urbancom.net>
Message-ID: <38F898BA.8745B405@urbancom.net>
Source record: 61402
Cross-posted to:
rec.radio.swap,rec.radio.amateur,rec.radio.amateur.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

I have one of the type M67712 class AB 30 Watts out average, 40 Watts max. The input drive is 300 mW. I am asking $ 60.00 including shipping each for them. RF
parts wants around $80.00 for the same.

These are brand new never been used and still have the one inch leads on them.

Thank You,

Bryan Fields, KB9MCI

kb9mci@qsl.net

Phone: (708) 862-3485

--
=-
"If there be time to expose through discussion the falsehood and the fallacies, to avert the evil by processes of education, the remedy to be applied is more speech, not enforced silence."
-- U.S. Supreme Court Justice Louis Brandeis, 1927

"Necessity is the plea for every infringement of human freedom. It is the argument of tyrants; it is the creed of slaves."
--William Pitt, 1783

And just 'cus I am a Pyro,

"Nonflammable is not a challenge"
--Bart Simpson

Bryan Fields, KB9MCI

3089. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fh7qb.hdj.root@radioactivex.lebesque-al.net>
Source record: 61403
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>
>By "physical cross-sectional area of the antenna" I believe
>that Green meant, at least in the case of a dipole, the
>diameter of the wire multiplied by its total actual length.
>Is that what you understood?
>

By physical cross section, I mean the actual area as seen by the source and calculated by integrating the radial vector from the source over the area. Since it's easier to presume we're far away enough to consider the entire area facing the source perpendicular and constant r, just assume it's the area/(4*pi*r^2) or for the cylinder, lD/(4*pi*r^2). I'm not sure what he meant, but that's what I meant.

To the best I can tell, the dimensions in the geometry that ever get quoted as being related to function are the ones that have intuitive appeal in terms of wavelength and so are along the current. A short dipole is considered physically smaller than an ideal dipole no matter how wide it is, for some reason. As soon as you improve it by making it the appropriate width, it gets called electrically large, but everyone still calls it physically smaller, even if the phyaical area has been made twice the electrical area in the process. This is further confused by calling it "superdirective" and defining the directivity as an increase in the main lobe rather than a decrease of the rest of the pattern. They draw an isotropic antenna through the average, but make it sound like this amounts to an increase of 1.5 when they should call that 1 and go down from there. Quite honestly, I find the termonology a mess. It's ridiculous to have standard terms that requires so long just to make sure everyone is talking about the same thing just because the question is slightly different,

3090. Re: How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: "Gary C. Lewis" <gclewis@penn.com>
Message-ID: <38F8CB90.302@penn.com>
Source record: 61404

The pair I have, 6146w's, in my 520 have been in there for over 10 years and still give me fine service. There is no reason why a pair of "B's" should not last just as long. As to the "life" of the tubes I have no idea.

3091. Re: Removal of paint on copper wire

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: "p.hessell" <p.hessel@chello.nl>
Message-ID: <Wg1K4.48667$5r.561112@nlnews00.chello.com>
Source record: 61405

Woody White <woody.white@att.net> wrote in message
news:38F66E5C.DFF589F3@att.net...
> Assuming you only want to clean the end for connection...
>
> Some enameled (painted) wire uses material which will
> decompose at soldering temperatures, others, not so much.
> If you have the type that will decompose, touch your
> soldering iron (~700 degrees F) to the exposed end of the
> cut wire and apply a little solder/flux. Move the iron down
> the wire as it heats (and the insulation decomposes) adding
> solder/flux.
If that does not fix your problem, put the end of the wire on an Aspirin
(Acetyl salicyl acid)
and heat it by putting the tip of your soldering iron on top.
DO NOT BREATHE!!! The fumes are VERY agressive.
Works even for multi- stranded magnet wire (Litze).

Other recipe:
Lite a small quantity (egg cup) of alcohol (metanol)
Slowly dip the wire through the flame into the alcohol. This way it won't
oxidize.
Extinguish the flame with a metal cap.
Now you can take the wire out, and solder it.

> Woody
> ----------------
> VR2RD wrote:
> >
> > Hi,
> >
> > Can anyone tell me how to reomove paints on fine copper wire. I used a
> > knife and the wire broke.
> >
> > 73
> > VR2RD
>
> --
> --
> NEW web site format!.....................NEW site
> address!
>
> Ham Homebrew/ATV Circuits...Scanning Electron Microscope
> Images
>
> http://woody.white.home.att.net ...de Woody,

> WB4QXE

3092. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F8A44F.37903632@xprint.ca>
Source record: 61406
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
> Joseph Legris said some stuff about
>
> >
> >By "physical cross-sectional area of the antenna" I believe
> >that Green meant, at least in the case of a dipole, the
> >diameter of the wire multiplied by its total actual length.
> >Is that what you understood?
> >
>
> By physical cross section, I mean the actual area as seen by the
> source and calculated by integrating the radial vector from the
> source over the area. Since it's easier to presume we're far away
> enough to consider the entire area facing the source perpendicular
> and constant r, just assume it's the area/(4*pi*r^2) or for the
> cylinder, lD/(4*pi*r^2). I'm not sure what he meant, but that's what
> I meant.

I'm still not clear if you are talking about the actual cross-sectional area of the physical elements of the dipole, or some form of "equivalent" area which is a function of the electrical characteristics as well. We shall assume that we are only discussing the reception of plane parallel radiation striking the antenna broadside and polarized linearly in the same orientation as the antenna so as to achieve maximum signal strength.

I am quite sure that Green meant the former area - the product of the diameter of the wire used to construct the dipole and its actual length, as measured with a ruler. Let's call it A.

So here is my position (and Balanis's and, as far as I can tell, the authors of your reference):

The area mentioned by Green above, A, is much smaller than the maximum equivalent area of a small dipole antenna, denoted Aem in both our references, perhaps 100s of times smaller. That is, the amount of power receivable by the dipole and deliverable to a load, from a radiation field of P watts/square meter, is much greater, by 100s or even more, than simply AP. It is, in fact AemP. The amount of power available in practice will be less due to losses and

mismatching, but it is still much greater, in general, than AP.

Horn antennas are another matter. In their case, Aem can never exceed A (the physical cross sectional area of the horn aperture, as measured by a ruler) and, in practice, can never even equal it.

The bottom line, as I see it, is that "energy sucking" is an ugly name for the ability of small antennas to extract power from a radiant field in amounts greater than AP.

J.Legris
change the x to s to reply

3093. Thermal cut-back in a PA (was Re: How long last 6146B in regular use?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: "Dana H. Myers K6JQ" <dana@source.net>
Message-ID: <38F8AA37.E3CEF00E@source.net>
Source record: 61407

J M Noeding wrote:

> Once suggested - as a joke - to QST Hints & Kinks, that great
> improvement could be achieved by installing a termometer in the PA
> compartment. I made several statements as to economical improvements
> and cost reductions (seems to be very important arguments in America)
> - just to underline the joke, but ARRL staff didn't understand that it
> was a joke, hi (maybe a great idea to do, but rather impractical to
> do)

I've seen a number of VHF/UHF radios for sale (I recall the IC-2000H was one of them) that incorporates a thermal sensor (believe a thermistor) attached to the PA module to reduce output power when the module is too hot. It's not a silly idea at all for longevity, especially in PAs that have 'compromise' heat-sinks (i.e., enough heat-sink for light-duty use but not enough for heavy-duty use).

With these solid-state modules, the power supply voltage is reduced to a driver stage (which is, by the way, how low/med/high power control is usually accomplished) to reduce the output power.

You'd need a power-controlled stage that remains adequately linear for SSB use.

--
Dana K6JQ DoD #j
Dana@Source.Net

3094. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <1ooY8RBPnK+4Ewt8@jmwa.demon.co.uk>
Source record: 61408
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

<slrn8fh592.hdj.root@radioactivex.lebesque-al.net>, Bilge
<root@radioactivex.lebesque-al.net> inimitably wrote:
>Did you read it or just form the
> opinion based upon the person posting?

Yes, I read it, and I did my best to explain, politely, that the 'energy sucking' concept is not new, and that the behaviour of tuned antennas is perhaps not as widely known as it might be. I also cited informally, a paper in which a closely-allied treatment, aimed at the sort of readership that WB says he is concerned with, was given to ferrite rod antennas, and described the 'Passive Amplifier' tuned magnetic antenna, which I am very willing to demonstrate.

I also refrained from flaming WB for going down some unhelpful by-ways in his search for enlightenment.
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839 Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-automated nuclear-powered trawler,but it went into spontaneous fishing. PLEASE do not mail copies of newsgroup posts to me.

3095. Re: new QRP MFJ 2W Cub Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: John Harper <aa5yx@qsl.net>
Message-ID: <38F8DBA3.542F6EEA@qsl.net>
Source record: 61409

Steve Silverwood wrote:
>
> In article <20000408173118.15265.00000412@ng-cn1.aol.com>,
> rsylvan662@aol.com says...
> > Has anyone used the new MFJ 2W Cub Xcvr. Have you had good results with it? I
> > would like to buy one, but its not easily available yet
>
> Not surprising, it's not even on their web site yet that I can find! ;-)
>

Check this site for Cub info and a discounted group-buy deal:
http://www.qrparci.org/cub.html

--
John Harper AA5YX/2
Yashicas & Outdoor QRP: http://home.att.net/~j..harper

3096. Re: QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: John Harper <aa5yx@qsl.net>
Message-ID: <38F8DCD7.DB28BA7C@qsl.net>
Source record: 61410

http://emtech.steadynet.com/zmdesc.htm

--
John Harper AA5YX/2
Yashicas & Outdoor QRP: http://home.att.net/~j..harper

3097. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Roy McCammon <rbmccammon@ieee.org>
Message-ID: <38F8E82C.C2AC3EAC@ieee.org>
Source record: 61411
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Reg Edwards wrote:
>
> What a set of ninnies you are. Why not insert some numbers into the
> simple equations, including antenna radiation resistance and the
> matched receiver input resistance (for maximum receiver input volts),
> and the whole thing will become crystal clear - on both transmit and
> receive.

Because then we would have to argue about
what the symbols meant.

3098. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fhvd3.hmv.root@radioactivex.lebesque-al.net>
Source record: 61412
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>I'm still not clear if you are talking about the actual
>cross-sectional area of the physical elements of the dipole,
>or some form of "equivalent" area which is a function of the

That's what I'm referring to. The physical area.

>
>So here is my position (and Balanis's and, as far as I can
>tell, the authors of your reference):
>
>The area mentioned by Green above, A, is much smaller than
>the maximum equivalent area of a small dipole antenna,

My reference states explicitly the maximum equivalent area
is <= physical area. To make Aem independent of the length,
the width is left arbitrary, but always satisfies the
criteria that its physical area id at least as large.

>dipole and deliverable to a load, from a radiation field of
>P watts/square meter, is much greater, by 100s or even more,
>than simply AP. It is, in fact AemP. The amount of power

If that that thells you how wide it is, tell me the dimensions
of a dipole that is designed to receive a wavelength 1/50
of its length compared to an ideal. If your formulae and
derivations state what you imply, they should give all those
dimensions because it certainly isn't true that the diameter
can be arbitrarily chosen.

>The bottom line, as I see it, is that "energy sucking" is an
>ugly name for the ability of small antennas to extract power
>from a radiant field in amounts greater than AP.
>

I think the same mistake in what is normalized is the source
of confusion.

3099. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F90615.26394DEA@xprint.ca>
Source record: 61413
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
> My reference states explicitly the maximum equivalent area
> is <= physical area. To make Aem independent of the length,
> the width is left arbitrary, but always satisfies the
> criteria that its physical area id at least as large.
>
> >dipole and deliverable to a load, from a radiation field of
> >P watts/square meter, is much greater, by 100s or even more,
> >than simply AP. It is, in fact AemP. The amount of power
>
> If that that thells you how wide it is, tell me the dimensions
> of a dipole that is designed to receive a wavelength 1/50
> of its length compared to an ideal. If your formulae and
> derivations state what you imply, they should give all those
> dimensions because it certainly isn't true that the diameter
> can be arbitrarily chosen.
>
I thought we were discussing a small dipole, e.g. 1/50 of
the wavelength, not 50 times the wavelength. Continuing...

In the example I quoted originally from Balanis where the
actual length of the antenna is lambda/50, Aem = 0.119
lambda^2 and the maximum effective electrical width is shown
to be 5.95 lambda. That's where he got the value of of 1785
times the actual physical width of the conductor which he
gives as typically lambda/300.

So to put actual numbers there, let lambda = 1 meter. The
dipole is only 2 cm long. The actual width of the dipole
elements is 3.33mm, but the maximum effective width is 5.95
meters and the Aem is, of course, 0.119 square meters. All
from an antenna of actual cross sectional area of 6.67 x
10^-5 square meters.

J.Legris
change the x to s to reply

3100. Re: QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8db0ul023vr@news1.newsguy.com>
Source record: 61414

Grace Cunningham wrote in message <38F2571D.32A2@surfsouth.com>...
>I'm putting up a qrp station at home and need to know what tuner to use.
>Any advice is welcome! KE4QOP John

I would take a look at the MFJ-971. It's priced only a little higher than a manual 'QRP' tuner, but it has an actual SWR meter instead of an LED and a wattmeter with a 6 watt full scale range. Plus, it will do 300 watts (or so they claim - but I would believe >100) so when you use your QRO rig you don't have to take it out of line.

72 de WB8RCR
didleydadidah

3101. Kenwood TS 830s 11metre mod??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Scott <xsspeedNOxsSPAM@hotmail.com.invalid>
Message-ID: <1ca4f2e8.3b9c4e3d@usw-ex0108-062.remarq.com>
Source record: 61415

Could anyone tell me if the ts 830s can be modified to 11
meters, and if so how, or where to get such info. thanx's

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages,
Images, Audios, Videos, News, and Shopping. Smart is Beautiful

3102. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Dave Glawson <wa6cgr@ham-radio.com>
Message-ID: <38F95976.42E54B93@ham-radio.com>
Source record: 61416

Paul,

Please check out "http://www.ham-radio.com/wa6cgr" and
"http://www.ham-radio.com/sbms". These site are geared toward Microwave
homebrew, but contain a lot of stuff.

Thanks,

Dave Glawson - WA6CGR

Paul Kelley wrote:

> Howdy folks,
>
> I have volunteered to edit the Amateur Radio: Homebrew category
> (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
> Directory Project (http:/www.domz.org/). If you take a look at the
> current listings you will see this category needs some additions!
>
> If you have or know of a web site that has information on ham radio
> homebrew, PLEASE send me the URL for review! I am primarily looking
> for web sites offering project plans/schematics, but will list others
> if they pertain directly to home construction of ham radio equipment.
>
> Thanks...
>
> Paul N1BUG

3103. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: John Woodgate <jmw@jmwa.demon.co.uk>
Message-ID: <ivYt9hBP8N+4Ew+o@jmwa.demon.co.uk>
Source record: 61417
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

<38F8A44F.37903632@xprint.ca>, Joseph Legris <jalegris@xprint.ca>
inimitably wrote:
>The bottom line, as I see it, is that "energy sucking" is an
>ugly name for the ability of small antennas to extract power
>from a radiant field in amounts greater than AP.

Yes, and not a novel concept. Just not as well-known as, say, Wiedermann
and Franz's Law. (;-)
--
Regards, John Woodgate, OOO - Own Opinions Only. Phone +44 (0)1268 747839
Fax +44 (0)1268 777124. http://www.jmwa.demon.co.uk I wanted to make a fully-
automated nuclear-powered trawler,but it went into spontaneous fishing.
PLEASE do not mail copies of newsgroup posts to me.

3104. PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Ken Linney <ken@g3uda.demon.co.uk>
Message-ID: <955878588.24860.0.nnrp-08.c2deb680@news.demon.co.uk>
Source record: 61418

Hello All

I'm sure I read somewhere that you could make PCB's by an impact ironing-on process involving just a humble smoothing iron and some sort of direct contact with the copper clad board with an acetate sheet.

Have trolled around various sites but no luck. I am familiar with Ferric Chloride etching etc. Not tried the UV method however.

Any ideas, URLS, tips please?

Many thanks... Ken

3105. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8d8bgejbq1@uranium.btinternet.com>
Source record: 61486
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

What a set of ninnies you are. Why not insert some numbers into the simple equations, including antenna radiation resistance and the matched receiver input resistance (for maximum receiver input volts), and the whole thing will become crystal clear - on both transmit and receive.

Even Marconi understood such matters.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========

3106. Guide to the rec.radio Newsgroups

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: jeffreyh@Hawaii.Edu
Message-ID: <8d8qm0$61n$1@news.hawaii.edu>
Source record: 61487
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Archive-name: radio/personal-intro

This message describes the rec.radio.amateur.*, rec.radio.cb, rec.radio.info, and rec.radio.swap newsgroups, as well as their Internet mailing list counterparts and complements. It is intended to serve as a guide for the new reader on what to find where. Questions and comments may be directed to Jeffrey Herman, KH6O, jeffreyh@hawaii.edu, or Paul Schleck, K3FU, pschleck@novia.net.

This message was last changed on 14 March, 1998.

History
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Way back when, before there was a Usenet, the Internet hosted a mailing list for hams, called (appropriately enough) INFO-HAMS. Ham radio discussions were held on the mailing list, and sent to the mailboxes of those who had signed up for it. When the Usenet software was created, and net news as we now know it was developed, a newsgroup was created for hams: net.ham-radio. The mailing list and the newsgroup were gatewayed together, eventually.

Over the years, as the net grew, the volume of discussion became progressively higher. First one by one, and then as part of two reorganizations, what was once one group became many. In the process, developments elsewhere on the net were reflected in the groups as they were created, most notably the change to place all of the ham radio groups in one hierarchy.

The collection of newsgroups continues to grow as more people join the net, and as more topics of discussion gain volume, I expect to see more groups be created as well. This follows what is happening on the rest of the net.

Nearly all of the radio newsgroups have corresponding mailing lists, the notable exception being rec.radio.swap. There are also a few mailing lists that don't have newsgroups.

The Current Groups
==================

It's important to post messages to the group that's appropriate for them, and not to the groups that aren't. The whole idea of having different newsgroups is so that folks who aren't interested in, say, homebrewing, don't have to wade through messages about homebrewing on the way to read about Field Day. Posting appropriately is just good etiquette.

The rec.radio.amateur.misc group is the catchall. It is what rec.ham-radio was renamed to during the first major reorganization. Any amateur radio-related message that's not more appropriate in one of the other groups belongs here, from contesting to DX to ragchewing on VHF to information on becoming a ham.

The group rec.radio.amateur.digital.misc is for discussions related to (surprise!) digital amateur radio. This doesn't have to be the common two-meter AX.25 variety of packet radio, either; some of the most knowledgeable folks in radio digital communications can be found here, and anything in the general area is welcome. The name was changed to emphasize this, and to encourage discussion not only of other text-based digital modes, such as AMTOR, RTTY, and Clover, but things like digital voice and video as well. The former group, rec.radio.amateur.packet, was removed on September 21st, 1993. It is obsolete, and you should use .digital.misc instead (or the appropriate new mailing list, mentioned below). The group has .misc as part of the name to allow further specialization if the users wish it, such as .digital.tcp-ip.

The swap group is rec.radio.swap. This recognizes a fact that became evident shortly after the original group was formed: Hams don't just swap ham radio gear, and other folks besides hams swap ham equipment. If you have radio equipment, or test gear, or computer stuff that hams would be interested in, here's the place. Equipment wanted postings belong here too. Discussions about the equipment generally don't; if you wish to discuss a particular posting with the buyer, email is a much better way to do it, and the other groups, especially .equipment and .homebrew, are the place for public discussions. There is now a regular posting with information on how to go about buying and selling items in rec.radio.swap; please refer to it before you post there. To answer a frequently asked question: No, there is no mailing list that goes along with this group. If you can't read Usenet news directly, you're out of luck.

The group rec.radio.amateur.policy was created as a place for all the discussions that seem to drag on interminably about the many rules, regulations, legalities, and policies that surround amateur radio, both existing and proposed. Recent changes to the Amateur Radio Rules (FCC Part 97) have finally laid to rest the Great Usenet Pizza Autopatch Debate - it's now legal to order a pizza on the autopatch, if you're not in the pizza business - as well as complaints about now-preempted local scanner laws hostile to amateurs, but plenty of discussion about what a bunch of rotten no-goodniks the local frequency coordinating body is, as well as the neverending no-code debate, may still be found here.

The group rec.radio.cb is the place for all discussion about the Citizens' Band radio service. Such discussions have been very inflammatory in rec.ham-radio in the past; please do not cross-post to both rec.radio.cb and rec.radio.amateur.* unless the topic is genuinely of interest to both hams and CBers - and very few topics are.

The rec.radio.info group is just what its name implies: it's the place where informational messages from across rec.radio.* may be found, regardless of where else they're posted. As of this writing, information posted to the

group includes Cary Oler's daily solar progagation bulletins, ARRL bulletins, the Frequently Asked Questions files for the various groups, and radio modification instructions. This group is moderated, so you cannot post to it directly; if you try, even if your message is crossposted to one of the other groups, your message will be mailed to the moderator, who is currently David Dodell, WB7TPY. The email address for submissions to the group is rec.radio.info-moderator@primenet.com. Inquires and other adminis-trivia should be directed to rec.radio.info-request@primenet.com. For more information about rec.radio.info, consult the introduction and posting guidelines that are regularly posted to that newsgroup.

The groups r.r.amateur.antenna, .boatanchors, .dx, .equipment, .homebrew, and .space are for more specialized areas of ham radio: discussions about antennas, the older tube based amateur, military, and commercial gear, commercially-made equipment, homebrewing, and amateur radio space operations. The .equipment group is not the place for buying or selling equipment; that's what rec.radio.swap is for. Similarly, the .space group is specifically about amateur radio in space, such as the OSCAR program and SAREX, the Shuttle Amateur Radio EXperiment; other groups cover other aspects of satellites and space. Homebrewing isn't about making your own alcoholic beverages at home (that's rec.crafts.brewing), but rather construction of radio and electronic equipment by the amateur experimenter. The .dx group is devoted to long distance amateur communications. Each of these subgroups has its own charter and FAQ; please refer to the archives to find these documents.

Except for rec.radio.swap and rec.radio.cb, all of these newsgroups are available by Internet electronic mail in digest format; send a mail message containing "help" on a line by itself to listserv@ucsd.edu for instructions on how to use the mail server.

All of the groups can be posted to by electronic mail, though, by using a gateway at the University of Texas at Austin. To post a message this way, change the name of the group you wish to post to by replacing all of the '.'s with '-'s - for example, rec.radio.swap becomes rec-radio-swap - and send to that name@cs.utexas.edu (rec-radio-swap@cs.utexas.edu, for example). You may crosspost by including multiple addresses as Cc: entries (but see below). This gateway's continued availability is at the pleasure of the admins at UT-Austin, and is subject to going away at any time - and especially if forgeries and other net.abuses become a problem. You have been warned.

Mailing Lists
==========

In addition to the mailing lists that mirror the Usenet newsgroups, there also are a few that stand alone. These cover specific areas of ham radio, and discussion is focused on just those areas. PLEASE BE SURE TO SAVE THE WELCOME MESSAGE YOU RECEIVE AFTER SUBSCRIBING -- IT WILL CONTAIN IMPORTANT INFO REGARDING UNSUBSCRIBING!

The cq-contest mailing list is for discussions of contesting in ham radio. To join, send an email to cq-contesting-request@contesting.com.

The DX mailing list covers the finer points of DXing. This one is also joined by mailing "subscribe" on a line by itself, this time to dx-request@unbc.edu.

There's also a VHF mailing list, for VHF operators of the weak signal persuasion. You can join this one be sending "subscribe vhf" on a line by itself to vhf-request@w6yx.stanford.edu.

The QRP-L list is devoted to building and operating gear at low-power outputs. To subscribe, send an email to listproc@lehigh.edu and only write: subscribe qrp-l Your Name.

The TopBand e-list is devoted to all areas of operation on 160m. To subscribe, send an email to majordomo@contesting.com and only write: subscribe topband and follow the instructions you'll be sent.
This site, contesting.com, also hosts a couple dozen other ham-related e-lists. Use the above address, and only write: lists to get the entire index.

The Boatanchors e-list is devoted to the older tube-based ham, military, and commercial communications gear. To subscribe, send an email to: listserv@listserv.tempe.gov and only write: subscribe boatanchors

For homebuilding transmitters and receivers using tube technology, there is the Glowbugs e-list; send an email to: majordomo@piobaire.mines.uidaho.edu and only write: subscribe glowbugs <your@address.here>

The VHF DX discussion list can be accessed by sending an email to: majordomo@blacksheep.org and only writing: subscribe VHF-DX-discuss.

We now have a list devoted to amateur radio history. To subscribe, send an email to: ham-radio-history-subscribe@egroups.com - leave the body of the message blank.

Qth.net hosts over 100 ham-related e-lists, including lists devoted to each state, manufacturer, mode, band - too many to state here. Send an email to majordomo@qth.net and only write: lists to get the complete index.

For one of the most complete indexes of email lists, see the excellent web site http://pw2.netcom.com/~ac6v/pageae.html

Please do NOT send subscription requests to the mailing lists themselves; that doesn't work very often, and is very annoying to those on the list. Also, please keep your electronic mail address current with any mailing lists you subscribe to, as dealing with returned email is a nuisance for the person maintaining the mailing list.

A Few Words on Crossposting
==========

Please do not crosspost messages to two or more groups unless there is genuine interest in both groups in the topic being discussed, and when you do, please include a header line of the form "Followup-To: group.name" in your article's

headers (before the first blank line). This will cause followups to your article to go to the group listed in the Followup-To: line. If you wish to have replies to go to you by email, rather than be posted, use the word "poster" instead of the name of a group. Such a line appears in the headers of this article.

One of the few examples of productive cross-posting is with the rec.radio.info newsgroup. To provide a filtered presentation of information articles, while still maintaining visibility in their home newsgroups, the moderator strongly encourages cross-posting. All information articles should be submitted to the rec.radio.info moderator so that he may simultaneously cross-post your information to the appropriate newsgroups. Most newsreaders will only present the article once, and network bandwidth is conserved since only one article is propagated. If you make regular informational postings, and have made arrangements with the moderator to post directly to the group, please cross-post as appropriate.

--
Jeffrey Herman, KH6O, and your friendly rec.radio.amateur working-group
jeffreyh@hawaii.edu

3107. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: mikegi <mikegi@prestige.net>
Message-ID: <sfg0miv6ivv66@news.supernews.com>
Source record: 61488
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

"Bilge" <root@radioactivex.lebesque-al.net> wrote in message
>
> I didn't see anyone argue that the presence of an antenna
> invalidates the 1/r^2 falloff of the radiated power, so I cant
> see why there would be an issue.

EM is a weird beast. You can't simply look at one piece of the system, you have to look at the total field. The receiving antenna is not a simple passive device, it radiates too. It's field has to be added to the incident wave before calculating energy flow and that distorts the 1/r^2 falloff of an isolated transmitter.

Take a look at Schantz's em page, it has some interesting animations and interpretations of em energy flow around dipoles. Here's a link:

http://www.schantz.com/schantz.htm

Mike

3108. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fg41u.frc.root@radioactivex.lebesque-al.net>
Source record: 61489
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Reg Edwards said some stuff about
Re: Energy sucking is blatent self-promotion!! to usenet:
>What a set of ninnies you are. Why not insert some numbers into the
>simple equations, including antenna radiation resistance and the
>matched receiver input resistance (for maximum receiver input volts),
>and the whole thing will become crystal clear - on both transmit and
>receive.
>

In other words, you agree with me.

3109. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fg401.frc.root@radioactivex.lebesque-al.net>
Source record: 61490
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>Those figures were just a specific theoretical example given
>by Balanis. The point is, as he states:
>
>"Thus the wire antenna can capture much more power than is
>intercepted by its physical size! This should not come as a
>surprise. If the wire antenna would only capture the power
>incident on its physical size, it would be almost useless."
>

That's the part I don't believe follows from what you provided. The diameter of the dipole is never included as part of "effective size" If shortening the dipole by a factor of X increases the signal, the effective area is always X times larger regardless of how much it was simultaneously widened. The extra width is regarded a construction detail to obtain the right impedance. Simply because making such an approximation provides tractable mathematics + an empirical construction detail in an advantageous way to provide rules of thumb for engineering reasons doesn't fly here. I'm explicitly stating that detail is exactly the point. I have a statement from "Antenna Theory and Design", stutzman and thiele, pg 77 stating the same thing, most of which is obvious, but is included for context:

"The available power can also be calculated by examining the incident wave. The power density (Poynting vector magnitude) in the incoming wave is:

S = 1/2 |E x H*| = 1/2 |Ei|^2/\eta

The available power is found using the _maximum effective aperature_, A_em, which is _THE COLLECTING AREA OF THE ANTENNA_ (emphasis mine). The receiving antenna collects power from the incident wave in proportion to its maximum effective aperatures:

P_{aem} = S A_em

... calculation omitted which reproduces your result quoted from balanis, which was:

A_em = (3/8pi)\lamba^2 = 0.119\lambda^2

Continuing below, same page:

The maximum effective aperature of an ideal dipole is independent
of its length, \delta z ...

If it's independent of it's length, then you should find any signal
increase that results from it is due to the increased collection
area that was included "only" by making the antenna physically wider
to meet impedance requirements. Meeting this impedance condition
by adding passive components to the matching network will not acheive
the same thing, if for no other reason, ignores why the the matching
makes any difference in the first place. The impeadnce matching
required by an antenna to the environment is required soley to obtain
the additional are. The change in radiation resistance is precisely
due to the force of the additional incoming photons on the greater
number of electrons.

On page 172, same book, there is a table showing parameters for short
dipoles which shows every advantage gained by shortening the dipole
has an increase in width associated with maximizing its efficency.

As should always be the case, it's quite straight forward to relate the
area to the power using either a wave or particle picture, but in this
case, the wave picture is much more difficult to use than the particle
picture unless you quit at the assumptions used above to derive balanis
result. The problem was, either you or balanis didn't state that the
result is derived from assuming exactly what I stated about areas,
so it's non-sensical to contradict it. Either balanis' later remark
is taken out of context, or it was wrong. I doubt the latter since he
should be in a position to know his own assumptions.

3110. New HamRadio RealAudioFiles

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: pa5wx <pa5wx@amsat.org>
Message-ID: <HvVJ4.4619$Re3.106668@news.rdc1.ov.nl.home.com>
Source record: 61491
Cross-posted to: rec.radio.amateur.digital,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.packet

New Hamradio RealAudioFiles from 6 Metre contacts

Look at my homepage

Http://www.qsl.net/pa5wx

73 Andre PA5WX

3111. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fgatb.frc.root@radioactivex.lebesque-al.net>
Source record: 61492
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

mikegi said some stuff about

>
>Take a look at Schantz's em page, it has some interesting animations and
>interpretations of em energy flow around dipoles. Here's a link:

I'm going to have to take exception to several of his interpretations.
What his descriptions basically show is that they make sense until you try
to ask questions requiring quantum mechanics. He did an excellent job showing
the classical limit. Most of the places he mentions as problematic are right
at the limit of the classical equations he used to obtain them. I dont see
why he chose to stay with a classical description.

Consider his description of a source, where he uses the fields as
an energy storage mechanism that supplies energy to the radiation field.
His picture places the origin of the radiation at a causal surface he
derives classically. His causal surface is what you get from applying the
uncertainty principle and while his approach puts the origin of the
radiation at that point, which he acknowledges is not an odds-on
favorite, it's only the classical derivation that is the problem.
The usual radiation process requires a two vertex ineraction to produce
the radiation field. At one vertex there is a virtual photon and the
real one is radiated from the other. The virtual process is exactly
that energy stored in the fields and which ends up in the radiation
field. The point that he picks for his causal surface, is where the
uncertainty principle would set a limit for the appearance of a virtual
photon with the radiated enregy -- A photon of that energy which is
"further away" cannot be reabsorbed and satisfy the uncertainty principle.

This also solves his information discrepancy where he calls "curious"
the result that he need information flow with no net energy transfer
where he describes the fields as the dipole changes. He mentions that
that one should possibly consider the causal surface as a point of
"of equal and opposite" flow rather than one of 0 _net_ energy flow.
The concept of negative energy in this context is itself a problem.
Again, this problem goes away by not requiring you beat the uncertainty
principle. Appealing to the uncertainty principle may sound artificial,
but remember, the quantities he is calculating are themselves non-
physical quantities that never appear in any real measurement. The
uncertainty principle actually allows you to make such non-physical
calculations where thier non-physical effects never shows up in the
result.

What I don't see is why he chose to ignore the quantum aspects
of the process, which it is clearly not possible to do. Given

that his background as listed on his web page lists john wheeler as an advisor, I would assume the description is the way it is for a reason other than possibly being more amenable for use as an engineering model. I've been to wheeler's talks and from that I'm certain that the person that wrote this description did not suffer from any lack of exposure to the finest speculation in quantum weirdness.

3112. Sidetone injection point?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: digi <dave@omens.freeserve.co.uk>
Message-ID: <8d9f4d$me6$1@newsg4.svr.pol.co.uk>
Source record: 61493

Hi Thanks for reading,

I have a problem with my ft890 (yaesu)
it will only put out about a few milliwatts on cw but
works well in all other modes.
The drive voltage control is ok and there is a small
increase /decrease in signal displayed on a seperate
rx when the pwr control is adjusted.
Also the sidetone sounds stable,i have not been able to obtain a workshop
manual for this radio so have little info on it.
When i put the scope on the i.f amp
ther is no sidetone detectable when the rig is keyed down?According to the
block diagram i have the sidetoneis injected halfway down the the rf chain
and fed into a pair of mixers,but still no sidetone at this point.can anyone
tell me where the sidetone is usualy injected or any other info would be
appreciated.

TIA Dave mw5adj

3113. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-15 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <38F840AD.8253C2D1@cmcorp.com>
Source record: 61494

Gansel wrote:

> I am looking for some resistors that will handle 40 amps at .405 ohms. Does
> anyone know where I could even begin looking for such a thing? I'm trying
> to duplicate a battery discharger that will discharge a 28vdc battery at a
> certain rate.
>
> Thanks
> Todd
> KC5YED/7

I'd recommend you build a solid state discharger.
Power transistors or FETs can maintain the current constant as the voltage
drops.
(As opposed to a resistor!)

If you put your resistor (R405) across a real 28 volt supply, you don't get 40
amps.
(more like 70!) But even 40 amps at 28 volts is 1120 watts, a LOT of heat.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

3114. DSP projects ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38FA52A7.FBF1B276@ica.net>
Source record: 61345

Looking for DSP based Ham Radio projects. I have the Frohne
DSP article for the R2 receiver. Wondering if there have been others,
Especially interested in FM based projects.
Please e-mail: hduff@ica.net
Thanks !

3115. Wanted: "QRP Power"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <38FA53B7.1E6D84D9@ica.net>
Source record: 61346

Anyone have a copy of "QRP Power" (ARRL) they'd like to sell ?
Please rpely by e-mail.
Thanks

3116. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38FA557A.4CF264B6@eznec.com>
Source record: 61347
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:

>. . .

> Skip this relative to, normalized with, nonsense. Derive, from first
> princles (maxwell's eqns) an ideal and short dipole. Produce the
> angular distribution for the ABSOLUTE power as a function of
> (r,\theta, \phi). . .

>. . .

There's hardly a need to do this. You can find it already done in Kraus' _Antennas_. In the first edition, Chapter 3 is "The Antenna as an Aperture", which covers the topic. In the second edition, the topic is covered in several sections of Chapter 2. See in particular section 2-20, "Maximumum Effective Aperture of a Short Dipole" and 2-21, "Maximum Effective Aperture of a Linear [lambda]/2 Antenna".

You might have to refer back in the book a bit to get to Maxwell's equations, but they're there.

Roy Lewallen, W7EL

3117. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38FA57E8.FEFB40BB@xprint.ca>
Source record: 61348
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
> Prove it.
[snip]

I have already provided you with a reference and specific quotations from Balanis. I cannot do any better than that. Balanis uses conventional notation and describes well-known results. He appears to agree with the reference you have provided.

I can show you exactly how Balanis calculates the Aem of a short lossless dipole if you care to see it (page 83). Beyond that you'll have to read the book yourself.

First, he assumes that the current of a short dipole is constant and of uniform phase (because length << lambda). This give the total voltage induced by the field in the dipole (all amplitudes are peak, not RMS),

Vt = E . L

where E electrical field of the incident wave and L is the length of the dipole.

Next, for a uniform plane wave he writes the incident power density,

Wi = E^2 / 2n

where n is the intrinsic impedance of the medium (air or vacuum = 120pi = 377 ohms).

Then he uses the derived radiation resistance of a short dipole (see page 136),

Rr = 80(pi . L / lambda)^2

and the equation for the Aem of a lossless antenna (page 82),

Aem = |Vt|^2 / 8Wi . Rr

to arrive at the result: Aem = 0.119 lambda^2

J.Legris
change the x to s to reply

3118. ISO - PE/IE QRP Rig Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: "Cestyll O. Dywod, esq." <willi6@erols.com>
Message-ID: <38FA59EE.31D5A090@erols.com>
Source record: 61349

Sometime in the mid to late 60s (perhaps 67-68?), there was a construction article in either Popular Electronics or Electronics Illustrated (I'm leaning towards Pop'tronics) for a two transistor (2N3053s???) QRP rig on 80 Meters. It may even have been the cover article. It was point to point wired in a 3x4x5" Bud box, rather than PCB. It used miniductor coils and I recall that there was a metal particial in the middle of the box with the Osc on one side and the PA on the other.

If someone can point me towards the Month/Year of that article, or has a copy of the magazine, I would greatly appreciate getting a copy.

Thanks!

73, Dave

Dave Williams - K7HMP
Stafford, Virginia

3119. Re: Kenwood TS 830s 11metre mod??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: "William F. Hagen" <whagen@inreach.com>
Message-ID: <38FA65E5.D57D08E1@inreach.com>
Source record: 61350

I think there is enough space behind the front panel to install a small
CB radio.

Scott wrote:
>
> Could anyone tell me if the ts 830s can be modified to 11
> meters, and if so how, or where to get such info. thanx's
>
> * Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

3120. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Roy McCammon <rbmccammon@ieee.org>
Message-ID: <38FA7C9E.669D453C@ieee.org>
Source record: 61351
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:

> The "distortion" occurs because of what is NOT re-radiated.
> It's an effect, not the cause. The total radiation striking
> the antenna doesn't change.

I suppose, strictly speaking, that for a lossless antenna
constructed from a perfect conductor, no radiation strikes
the antenna, but rather the antenna guides the EM radiation
to the load.

3121. Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: John Mackesy <mack@melbpc.org.au>
Message-ID: <8da2qjohc1@possum.melbpc.org.au>
Source record: 61419
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

I'd like to hear from users of the Singer/Panoramic MF5/CA5 RF Spectrum Analyzer, also from anyone who operates or has data for a Singer/Panoramic REC-1 Receiving Converter.

I have 2 x MF5/CA5 (also known as SSB-50) 1 early model (has its problems) and 1 late model. The later equip't looks and performs like new. I also have 2 x RF-7a VFOs, and 1 REC-1, and doc for everything EXCEPT REC-1.

Thanks,

John Mackesy VK3XAO

3122. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <38F90959.B6CDB208@flash.net>
Source record: 61420

Hello.
I have done almost exactly the same thing. I made my low-ohmmage/high wattage resistors myself using copper wire. Get a wire table that shows wire gauge vs. resistance per 1000', and calculate how much wire of a certain gauge to give your desired ohmmage. The table will also show recommended current for given wire gauge in both open air and enclosed.
I made a very low resistance resistor this way, to test a battery charger. It drew around 60 amps at 28 volts. I forget how much wire I used, several hundred feet I think; wound it in a 2' coil. I used a homebrew 4-wire ohmmeter using a constant current power supply to actually measure the resistance of the coil. Different manufacturers of copper wire vary the diameter of the wire slightly, so you have to fine tune the actual length to get the exact value you need.
The finished resistor worked fine; it got hot to the touch, but not hot enough to require fan cooling.
I've made low value/high current resistors this way a number of times.
Steve AA7U

Gansel wrote:
>
> I am looking for some resistors that will handle 40 amps at .405 ohms. Does
> anyone know where I could even begin looking for such a thing? I'm trying
> to duplicate a battery discharger that will discharge a 28vdc battery at a
> certain rate.
>
> Thanks
> Todd
> KC5YED/7

3123. FM Reciever

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Terminal Storm <s70rmy@hotmail.com>
Message-ID: <01bfa746$f65e7cc0$e90335a1@default>
Source record: 61421

Hi!
Where could I find schematics for a FM receiver capable of receiving
frequencies from 110 MHz to say 200 MHz, or even a wider band.
Thanx.

Signed: Terminal Storm (TSt)

"It is by will alone I set my mind in motion.
It is by the juice of Sapho that thoughts acquire speed -
The lips acquire stains -
The stains become a warning -
It is by will alone I set my mind in motion."

3124. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8dbada$867$1@plutonium.btinternet.com>
Source record: 61422
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

There's a field strength E which induces V volts in the small antenna, say a small HIGHLY efficient loop. So put loss resistance = 0. The loop has a radiation resistance Rrad and an inductance L. X >> Rrad.

The loop current is V / (R + jX) amps. But there's no power dissipated in the loop. Any energy collected is re-radiated because the loop's only resistance is Rr. So insofar as the field is concerned the loop may just as well not be there.

Now break the loop and insert a tuning capacitor which neutralises the inductive reactance. There is now a far greater current flowing round the loop. It is Q = X / Rr times greater.

But there's still no power dissipated in the loop. Any energy collected must be re-radiated because there is no loss resistance in the loop, only radiation resistance. Again, insofar as the field is concerned, the loop may just as well not exist.

Now connect a matched receiver into the loop. Matched to the radiation resistance because we want to maximise the power input to the receiver. Receiver input resistance is Rr ohms.

The total resistance in the loop is now twice the radiation resistance. The loop current I = V / 2 / Rr amps and the power dissipated in the receiver is Square(V) / 4 / Rr watts. And obviously the same amount of power is re-radiated. But now the field is certainly aware of the existence of the loop. The field becomes very distorted in the immediate neighbourhood of the antenna.

So, the act of inserting a receiver into the loop, with a loss resistance equal to the radiation resistance, results in an enormous increase in energy extracted from the field - if you like - it really sucks it in. But that's quite normal.

In practice, the conductor and other loss resistances are no-where near zero. Even before the loop is tuned and the receiver included, the antenna extracts energy from the field and re-radiates only a small fraction of it. So the act of tuning and inserting the matched receiver does not have such a dramatic effect.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp

==========
Joseph Legris <jalegris@xprint.ca> wrote in message
news:38F7D6EF.A04C9E9E@xprint.ca...
> Reg Edwards wrote:
> >
> > What a set of ninnies you are. Why not insert some numbers into
the
> > simple equations, including antenna radiation resistance and the
> > matched receiver input resistance (for maximum receiver input
volts),
> > and the whole thing will become crystal clear - on both transmit
and
> > receive.
> >
> > Even Marconi understood such matters.
>
> Which simple equations do you have in mind?
>
> J.Legris
> change the x to s to reply

3125. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fidj6.hoh.root@radioactivex.lebesque-al.net>
Source record: 61423
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>>
>I thought we were discussing a small dipole, e.g. 1/50 of
>the wavelength, not 50 times the wavelength. Continuing...
>
Sorry. I wrote it backwards. I meant reduce the length of
the dipole to be 1/50 th, not reduce the wavelentg.

>So to put actual numbers there, let lambda = 1 meter. The
>dipole is only 2 cm long. The actual width of the dipole
>elements is 3.33mm, but the maximum effective width is 5.95
>meters and the Aem is, of course, 0.119 square meters. All
>from an antenna of actual cross sectional area of 6.67 x
>10^-5 square meters.
>

You are missing the point that what have needs to include
"effective relative to what?". Again from the same reference,
stutzman and thiele:

"The available power is found using the maximum effective aperature,
Aem, which is the __COLLECTING AREA OF THE ANTENNA_. The receiving
antenna collects power from the incident wave IN PROPORTION to
its maximum effective aperature:

P = S Aem"

So, the very first assumption used to derive anything states the
physical area is equal to the maximum effective aperature. 2pages
later, (pg 79), the following is stated:

"We will show in Sec. 7.3 that for electrically large antennas,
effective aperature is EQUAL TO OR LESS than the PHYSICAL
aperature area of the antenna Ap, which is expressed using
_aperature efficiency \epsilon_{ap}:

Ae = \epsilon_{ap} * Ap

From Sec. 7.3.2, pg 295:

Ae = \epsilon_{ap} * Ap 0<= \epsilon_{ap} <= 1

Aperature efficiency, \epsilon_{ap} is a measure of how efficiently
the PHYSICAL AREA is utilized

-- To make any comparison which is valid you need the following --

(1) A reference to use. You need the physical dimensions of some
antenna which is of optimal dimensions. My opinion is you get
the same result for any one you choose, but to eliminate any
misunderstanding and keep it simple, choose a dipole with
length = \lambda = 1 meter. Find the physical diameter that
gets you the closest to the value 0.119 m^2, or at least is the
smallest diameter you use before you lose signal. The derivation
assumed infinitely thin, which taken literally doesnt tell
you anything at all about a physical area.

A) The short form of the answer, starting with an ideal
dipole is:

Aem = Ap definition

The power collected by the antenna is:

Pr_ideal = Aem_ideal * S

The power received is also defined the same way:

Pr_short = Aem_short * S

Aem is independent of z, so a short dipole and the ideal
receive the same power iff Aem is the same for both since
S doesnt change. This is the same as saying Aem is independent
of length (you could instead say width, but then the
interpretation of effective lengths would be even more obscure)
Aem is independent of length, so must Ap be independent of
length as well since that's how it was defined from the start.
Hence, two dipole antennas can only be equivalent if the physical
areas are equal and the optimum value is given by the above.
A smaller physical area ALWAYS means smaller effective area.
By contrast, you can have a less than optimal antenna any
number of ways, so any antenna with a physical area equal to
the physical area of an optimal antenna of the same area
will have an effective area equal to or LESS than the ideal.

See below for a longer redundant version showing opportunities
to invert what you call your reference and therfore fail hold
the same things constant when _applying_ the formulae. (Not
mistakes in the formulae)

(2) Since there doesnt seem to be a dispute over the definition of
the effective aperature, calculate the power received from some
source radiating Ps isotropically into 4*pi:

Aem = Ap, Ap = Physical area, by the initial assumptions for
all of the derivations that don't seem to be in
dispute.

Pr = S Aem, Pr = received power, S = power density from
the poynting vector
describing the source

S = Ps/[4*pi*r^2]

So, taking the cross sectional area of a cylinder such that
the source distance is large enough to avoid integrating over
r, the area Ap = l*D and the power received is:

Ps l D
Pr = --------
4 pi r^2

(3) The effective aperature does not change by shortening the dipole,
but no where, is it claimed that the width remains unchanged. The
above sets a hard physical limit, but it requires real numbers,
so plug in the best case scenario, 0.119 \lambda^2 and assume
1 meter for \lambda. So, the width must be:

l*D = 0.119 * 1m^2

or D = 0.119 meters.

The power recieived is then fixed and related to optimal
real dimensions. Pr_ideal (through a redundant calculation
for the sake of being explicit) is:

Pr_ideal = Ps* 0.119m^2/[4*pi*r^2]

(4) repeating for your dipole of 3.33 mm x 2cm I get:

Ap = 6.67 x 10-5 m. For the sake of argument, I'll pretend I
don't the outcome, so suppose this is
equal to some effective max. aperature Aem
of an ideal dipole.

(5) Aem is unchanged, by definition, from changes to the length and
and the result in the ideal case relates Aem to the Ap
(actually, this is totally unnecessary, but since no one wants
to believe the definition means what it says, I'll "calculate"
the values. The definition Ap = Aem means any dipole, not just
the ideal case as it seems to have been assumed).

So, the short dipole is electrically equivalent to a 1 meter
dipole:

Aem(short) = Aem(ideal) ; by the definition

l*d = 6.67 * 10^-6 m^2 = D(ideal) * 1m

So the equivalent "ideal" dipole has a diameter of:

D = 6.67 x 10^-6 meters.

This is quite different from what was calculated for the ideal
dipole using the the theoretical estimate and applying the exact

same requirement that at a length of 1 m, the optimal ability
to collect power meant that the corresponding width as determinded
from Aem = Ap = 0.119 \lambda^2 had to be 0.119 meters.

(6) Continuing, the power received from your short dipole is found
as before:

Pr = Ps * Aem/[4 * pi *r^2]

= Ps* 6.67x10^-6 m^2 /[4 *pi*r^2]

(7) You're claim is that this is equivalent to the power received
by a dipole given by 0.119 \lambda^2. That was calculated
above to be:

Pr_ideal = 0.119*Ps/[4 pi*r^2]

The ratio indicates the optimized ideal dipole recieves an enormously
greater power than the short dipole. The reason should be obvious.
These two numbers compare two things that are not related to each
other a priori through whatever formulae were used to derive the
short dipole result you state, but you assumed they were equivalent.

In fact, they ARE related. What is the relationship?

Pr/Pr_ideal = 6.67x10^-5/0.119
= 5.6 x 10^-4

Your short dipole receives radiation equivalent to a dipole
1 meter long that collects no where near that which the area
given by what .119 \lambda^2 gives you. If I recall, the
difference is what you were calling an increase. You've
inverted the relationship, by calling those two power values
equal and introducing a constant multiplier which is subsequently
never removed. Whether it was explicitly overlooked or whether
implied in the text, that is where the confusion lies.

(8) You can save the entire set of superfluous steps by simply using
the definition Ap = Aem for the ideal case along with the assumption
(or really, forced property by decree in the texts) that Aem is
independent of length. That means Ap is independent of length
and by the assumption that preceded all any of the calculations,
that Pr = S Aem, Pr = S Ap, must be true.

3126. Re: Kenwood TS 830s 11metre mod??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Dan K Nelson <w6dkn@qsl.net>
Message-ID: <vTcK4.1723$hA6.268868@dfiatx1-snr1.gtei.net>
Source record: 61424

Scott <xsspeedNOxsSPAM@hotmail.com.invalid> wrote in message
news:1ca4f2e8.3b9c4e3d@usw-ex0108-062.remarq.com...
> Could anyone tell me if the ts 830s can be modified to 11
> meters, and if so how, or where to get such info. thanx's
>

try www.fcc.gov

3127. NEW WEB PAGE RADIO PERSO

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: "francis.castelain" <francis.castelain@wanadoo.fr>
Message-ID: <8dbp4tqhu1@wanadoo.fr>
Source record: 61425

http://perso.wanadoo.fr/f5usv/

73's Francis from FRANCE

F5USV

3128. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fis60.hoh.root@radioactivex.lebesque-al.net>
Source record: 61426
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Reg Edwards said some stuff about

>obviously the same amount of power is re-radiated. But now the field
>is certainly aware of the existence of the loop. The field becomes
>very distorted in the immediate neighbourhood of the antenna.
>
The "distortion" occurs because of what is NOT re-radiated.
It's an effect, not the cause. The total radiation striking
the antenna doesn't change. Any "distortion" is due to
having removed a fraction. It couldn't very well look identical
as it does with no antenna or you wouldn't have extracted energy.

>So, the act of inserting a receiver into the loop, with a loss
>resistance equal to the radiation resistance, results in an enormous
>increase in energy extracted from the field - if you like - it
>really sucks it in. But that's quite normal.
>

How about an enormous amount of energy that ends up in your receiver
rather than back in space. The same amount hits the antenna either
way.

>In practice, the conductor and other loss resistances are no-where
>near zero. Even before the loop is tuned and the receiver included,
>the antenna extracts energy from the field and re-radiates only a
>small fraction of it. So the act of tuning and inserting the matched
>receiver does not have such a dramatic effect.

Matching involves matching two things. Matching the antenna to
the impedance of the dielectric that surrounds it and matching
the receiver to the antenna. Matching to the surrounding dielectric
is the reason for the geometry. The optimal components to match
to the receiver are those which maximize the tranfer of the power
from the antenna.

3129. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8dc6v7$qg1$1@uranium.btinternet.com>
Source record: 61427
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Sorry Bilge, you are unnecessarily going off at half dozen different
tangents simultaneously.

I have provided a satisfactory explanation of the more APPARENT than
real power suck-in. There is no "enormous amount of energy" involved.
As I suggested before, just put some sensible numbers into the simple
equations. Don't let the thought of a little arithmetic put you off.
--
Reg.
==========
Bilge <root@radioactivex.lebesque-al.net> wrote in message
news:slrn8fis60.hoh.root@radioactivex.lebesque-al.net...
> Reg Edwards said some stuff about
>
> >obviously the same amount of power is re-radiated. But now the
field
> >is certainly aware of the existence of the loop. The field
becomes
> >very distorted in the immediate neighbourhood of the antenna.
> >
> The "distortion" occurs because of what is NOT re-radiated.
> It's an effect, not the cause. The total radiation striking
> the antenna doesn't change. Any "distortion" is due to
> having removed a fraction. It couldn't very well look identical
> as it does with no antenna or you wouldn't have extracted energy.
>
> >So, the act of inserting a receiver into the loop, with a loss
> >resistance equal to the radiation resistance, results in an
enormous
> >increase in energy extracted from the field - if you like - it
> >really sucks it in. But that's quite normal.
> >
>
> How about an enormous amount of energy that ends up in your receiver
> rather than back in space. The same amount hits the antenna either
> way.
>
> >In practice, the conductor and other loss resistances are no-where
> >near zero. Even before the loop is tuned and the receiver
included,
> >the antenna extracts energy from the field and re-radiates only a
> >small fraction of it. So the act of tuning and inserting the
matched

> >receiver does not have such a dramatic effect.
>
>
> Matching involves matching two things. Matching the antenna to
> the impedance of the dielectric that surrounds it and matching
> the receiver to the antenna. Matching to the surrounding dielectric
> is the reason for the geometry. The optimal components to match
> to the receiver are those which maximize the tranfer of the power
> from the antenna.
>
>

3130. HT transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: g8jnz <g8jnz@netcomuk.co.uk>
Message-ID: <8dcagn$ni2$2@taliesin2.netcom.net.uk>
Source record: 61428

Does anyone have a 750v - 800v 500mA transformer going spare please? Needed urgently after ours cooked. Your price.

de Bob M.
g8jnz@gb7zhr.ampr.org

3131. WTB: Capacitor 40/40/40/40uF @500V Can Type Cap or similar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Groovy Toones <groovy_toones@hotmail.com>
Message-ID: <AviK4.4266$4W3.67173@typhoon.nyroc.rr.com>
Source record: 61429
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap,sci.electronics.components,sci.electronics.equipment,sci.electronics.parts

Hi there
I am looking to buy a few multisection can type caps
for tube guitar amps that blew their caps

40/40/40/40 uF @500V or similar capacitance

thanks!!!
please email me

3132. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fjgrn.hoh.root@radioactivex.lebesque-al.net>
Source record: 61430
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Reg Edwards said some stuff about
Re: Energy sucking is blatent self-promotion!! to usenet:
>Sorry Bilge, you are unnecessarily going off at half dozen different
>tangents simultaneously.
>
>I have provided a satisfactory explanation of the more APPARENT than
>real power suck-in. There is no "enormous amount of energy" involved.
>As I suggested before, just put some sensible numbers into the simple
>equations. Don't let the thought of a little arithmetic put you off.
>--
> Reg.

I've already posted it. See the other post where I show exactly
what I get by ignoring any of my simpler arguments and just
what keeps getting offered as demonstrating the opposite. I
get the same result I get every other way. The "Huge" was your
own wording, but in fact does describle the result with the values
I was given to work with. It also reinforces the idea that
plugging in numbers requires more effort than just invoking
some physical reasonableness, without necessarily doing anything
but confusing the issue. You should never calculate something
without knowing all of the qualitative features that went into
deriving the formulae.

3133. Re: QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: TC <cadigant2@uofs.edu>
Message-ID: <38F9C275.68BA61FE@uofs.edu>
Source record: 61431

When I last moved and only had a small space for qrp, I replaced several tuners and SWR meters with MFJ-971 and a rotary switch - works fine with my qrp rigs, my little Icom 725, and even my little 6m rig.

Tim C.
WC1F

3134. Re: QRP Antenna Tuners; Which is the best & why?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8dck56$ab2$1@uranium.btinternet.com>
Source record: 61432

A tuner is not needed for QRP. Just put the right number of turns on
the PA output transformer, or the link coupling on the output tuned
circuit. No tuner, no loss.

Of course, tuner loss doesn't matter if the tuner is considered to be
an integral part of the transmitter, such as a Pi-tank output circuit.
A Pi tank inside the Tx box is just one of many forms of tuner.

By extension, why not define the transmission line as being part of
the transmitter. Full QRP power can then be applied right at the
centre of the dipole.

Perhaps QRP should be defined in terms of ERP = effective radiated
power. Tuner, feeder, antenna and ground losses can then be treated
in the same way as PA inefficiencies - they don't count..
--
Regards, Reg.
==========
xpyttl <xpyttl@earthling.net> wrote in message
news:8db0ul023vr@news1.newsguy.com...
> Grace Cunningham wrote in message <38F2571D.32A2@surfsouth.com>...
> >I'm putting up a qrp station at home and need to know what tuner to
use.
> >Any advice is welcome! KE4QOP John
>
> I would take a look at the MFJ-971. It's priced only a little
higher than a
> manual 'QRP' tuner, but it has an actual SWR meter instead of an LED
and a
> wattmeter with a 6 watt full scale range. Plus, it will do 300
watts (or so
> they claim - but I would believe >100) so when you use your QRO rig
you
> don't have to take it out of line.
>
> 72 de WB8RCR
> didleydadidah
>
>
>

3135. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <38F9DC45.9C44C1D6@xprint.ca>
Source record: 61433
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:
>
> You are missing the point that what have needs to include
> "effective relative to what?". Again from the same reference,
> stutzman and thiele:
>
> "The available power is found using the maximum effective aperature,
> Aem, which is the __COLLECTING AREA OF THE ANTENNA_. The receiving
> antenna collects power from the incident wave IN PROPORTION to
> its maximum effective aperature:
>
> P = S Aem"
>
> So, the very first assumption used to derive anything states the
> physical area is equal to the maximum effective aperature. 2pages
> later, (pg 79), the following is stated:
>
> "We will show in Sec. 7.3 that for electrically large antennas,
> effective aperature is EQUAL TO OR LESS than the PHYSICAL
> aperature area of the antenna Ap, which is expressed using
> _aperature efficiency \epsilon_{ap}:
>
[snip]

You appear to be confusing electrically large and small
antennas. It is true that the Aem of an electrically large
antenna cannot be greater than it's physical aperture area.
A short dipole (length << lambda) is not an electrically
large antenna. Its Aem is larger than its physical area.

This apparent confusion between large and small antennas
leads to your incorrect assumption that the Aem of dipoles
is never better than Ap, the physical area.

How does your reference define the term "electrically
large"?

J.Legris
change the x to s to reply

3136. QST Article on Using a HP Plotter for PC Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Harry Brown <hbrown@voicenet.com>
Message-ID: <EgIK4.206$p32.13538@news2.voicenet.com>
Source record: 61434

I'm trying to locate an article from QST, early to mid 90's describing the use of an HP Plotter to directly print on copper boards. The article described how to modify a standard office supply store felt tip pen whose ink is resistant to standard etchant chemicals.

The plotter of course was driven by a PC to print the pattern on the board.

Any info would be appreciated.

73, Harry, W3IIT

3137. Re: Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Harry Brown <hbrown@voicenet.com>
Message-ID: <WjlK4.207$p32.12476@news2.voicenet.com>
Source record: 61435

Try FAR Circuits. In addition to making boards for projects in magazine articles, they will also do custom work.

Check their web page at http://www.cl.ais.net/farcir/

73, Harry, W3IIT

Derek Toeppen <derekt@rosalie.col.hp.com> wrote in message news:8d4t9ths1@nonews.col.hp.com...
> I am looking for the names of a few low cost manufactures of
> double sided, low volume PCB's. Any recommendations?
>
> Thanks
>
> Derek Toeppen
> WA0ZTI
> derek_toeppen@agilent.com

3138. Re: PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <WslK4.5164$sB3.3339@news.indigo.ie>
Source record: 61436

>Hello All
>
> I'm sure I read somewhere that you could make PCB's by an impact
>ironing-on process involving just a humble smoothing iron and some sort of
>direct contact with the copper clad board with an acetate sheet.
>
> Have trolled around various sites but no luck. I am familiar with Ferric
>Chloride etching etc. Not tried the UV method however.
>
> Any ideas, URLS, tips please?
>
> Many thanks... Ken
>

I have made some PCB's using Epson glossy photo paper and
a laser printer. See: www.qsl.net/ei9gq for details.

73, Ed. EI9GQ

--

Remove 'X' to reply.

3139. Re: PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Bill Kirkland <william.kirkland@sympatico.ca>
Message-ID: <38F9E857.FDA2C593@sympatico.ca>
Source record: 61437

I do not know what you mean by impact ironing-on process. If you are referring to the iron on process of transferring a printed image on to a copper clad board and then etching the board, then I suggest PnP Blue.

What you need to do is print your PCB image usig a laser printer (not ink jet) onto a PnP Blue sheet. The reason for the laser printer is that the toner consists of plastic particles that when melted by the heat in the printer form the black print. The PnP Blue sheet is then ironed onto the copper board. When cool peel the plastic backing off. I have had excellent results with this process - achieving line spacings of 10 mils. Note: the ironing process is a bit of an art - READ the instructions.

I have tried other iron on methods but PnP Blue has provided the most consistent results.

PnP Blue is available from

Techniks Inc.
P.O. Box 463
Ringoes NJ 08551
(908) 788-8249 for Orders

Last pricing I had it was 20 Sheets for $30 US.

Bill Kirkland
VE3JHU

Ken Linney wrote:
>
> Hello All
>
> I'm sure I read somewhere that you could make PCB's by an impact
> ironing-on process involving just a humble smoothing iron and some sort of
> direct contact with the copper clad board with an acetate sheet.
>
> Have trolled around various sites but no luck. I am familiar with Ferric
> Chloride etching etc. Not tried the UV method however.
>
> Any ideas, URLS, tips please?
>
> Many thanks... Ken

3140. Wanted: Icom IC-255A Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: William Phinizy <k6whp@gte.net>
Message-ID: <sSIK4.2067$hA6.376678@dfiatx1-snr1.gtei.net>
Source record: 61438

I am looking for an operator's manual for the old Icom IC-255A. I will
be happy to pay duplication and postage fees.

Thanks in advance..

Bill.

3141. Re: PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <38F9F11F.3C127856@mlecmn.net>
Source record: 61439

Eamon Skelton wrote:
>
> >Hello All
> >
> > I'm sure I read somewhere that you could make PCB's by an impact
> >ironing-on process involving just a humble smoothing iron and some sort of
> >direct contact with the copper clad board with an acetate sheet.
> >

An article entitled "Ironing Out Your Own Printed Circuit Boards" by
John Grebenkemper in the July 1993 QST gives details on a process using
plain-paper printouts from a laser printer or Xerox-type copier.

--
Lyle, K0LR

http://www.computerpro.com/~lyle

3142. FWD: Sca VHF meeting

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38f9fa9f.94571243@news.online.no>
Source record: 61440

From: Tommy Bj&#65533;rnstr&#65533;m <sm7nzb@algonet.se>
To: vushf@sk7do.te.hik.se <vushf@sk7do.te.hik.se>
Dato: 14. april 2000 15:40
Emne: VHF-meeting homepage !

EDR VHF-group have a link to www.rats.fi.
different languages available, for SM try:

http://www.rats.fi/svenska/vushf2000/vushf2000.html
for the moment registration via FAX and Phone only.
/ 73 Tommy

3143. Re: PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: Ken Linney <ken@g3uda.demon.co.uk>
Message-ID: <955909634.6761.0.nnrp-01.c2deb680@news.demon.co.uk>
Source record: 61441

Hello to all & thanks for the replies:

I will certainly investigate the PnP Blue method to start. Fellow constructor Harold, W4ZCB also suggests it works for him.

Sincere thanks to all ...

73es Ken

Bill Kirkland <william.kirkland@sympatico.ca> wrote in message news:38F9E857.FDA2C593@sympatico.ca...
> I do not know what you mean by impact ironing-on process. If you are
> referring to the iron on process of transferring a printed image on to a
> copper clad board and then etching the board, then I suggest PnP Blue.
>
> What you need to do is print your PCB image usig a laser printer (not
> ink jet) onto a PnP Blue sheet. The reason for the laser printer is that
> the toner consists of plastic particles that when melted by the heat in
> the printer form the black print. The PnP Blue sheet is then ironed onto
> the copper board. When cool peel the plastic backing off. I have had
> excellent results with this process - achieving line spacings of 10
> mils. Note: the ironing process is a bit of an art - READ the
> instructions.
>
> I have tried other iron on methods but PnP Blue has provided the most
> consistent results.
>
> PnP Blue is available from
>
> Techniks Inc.
> P.O. Box 463
> Ringoes NJ 08551
> (908) 788-8249 for Orders
>
> Last pricing I had it was 20 Sheets for $30 US.
>
> Bill Kirkland
> VE3JHU
>
>
> Ken Linney wrote:
> >
> > Hello All
> >
> > I'm sure I read somewhere that you could make PCB's by an impact

> > ironing-on process involving just a humble smoothing iron and some sort
of
> > direct contact with the copper clad board with an acetate sheet.
> >
> > Have trolled around various sites but no luck. I am familiar with
Ferric
> > Chloride etching etc. Not tried the UV method however.
> >
> > Any ideas, URLS, tips please?
> >
> > Many thanks... Ken

3144. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: root@radioactivex.lebesque-al.net
Message-ID: <slrn8fk79u.hoh.root@radioactivex.lebesque-al.net>
Source record: 61442
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris said some stuff about

>You appear to be confusing electrically large and small
>antennas. It is true that the Aem of an electrically large
>antenna cannot be greater than it's physical aperture area.
>A short dipole (length << lambda) is not an electrically
>large antenna. Its Aem is larger than its physical area.
>

Prove it. So far, I've taken whatever definitions you or any
one else has put up, chased down them down to make certain the
I write down the correct relationships and gotten the same results.
Now. Skip these stupid definitions which are nothing but redinition
and redefinition and for a change, you show EXPLICITLY from first
principles that you can violate cauality, qed and the rest. I'm
not going to continue to invert and reinvert normalizations just
because nobody learned any physics and can't keep the normalization
straight. I cannot find a single reference that lets my violate
the same physics that applies to everything else. I don't know
why one small segment of e&m has some mysterious attraction as
a voodoo by people, that cant even keep the straight the difference
in radiation fields/real photons and static fields/virtual photons.
They dont interact with each other under any theory known in
this universe and if measurements indicated they did, people
would be climbing all over themselves to be the first to publish
an extension to QED. Now, I've posted hundreds of lines catering
to other people's wish to use terminology which only buries the
absolute numbers. State a result, in watts for antennas which arent
constructed backwards. Pick Width and Height. Determine the current
distribution and produce what you claim for the small dipole.
Do not use any infinitely thin anything, unless you plan to
show how infinity scales.

>This apparent confusion between large and small antennas
>leads to your incorrect assumption that the Aem of dipoles
>is never better than Ap, the physical area.
>
>How does your reference define the term "electrically
>large"?
>
Skip this relative to, normalized with, nonsense. Derive, from first
princles (maxwell's eqns) an ideal and short dipole. Produce the
angular distribution for the ABSOLUTE power as a function of
(r,\theta, \phi). At this point, I'm not going to waste time trying

to find out where someone has inverted a value or added something they should have subtracted. Having me hunt down another definition of something irrelevant every time someone doesn't like the last result could go on forever. Produce a self contained reason to have me believe this isn't just another wasted of effort. If you are correct, you hould be able to show it. There should be no reason to use any definitions which aren't obvious. Everyone knows what a current is, a watt is, a steradian is. For any fixed value of the poynting vector S, show the small dipole collects radiation in excess of S x Ap. Not in terms of voltages in the receiver, but straigt out watts on the antenna surface. Explain how you don't violate the optical theorem.

3145. Re: Need homebrew web site URLs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <9FrK4.11879$fV.955192@bgtnsc05-news.ops.worldnet.att.net>
Source record: 61443

The quotation mark became part of the URL for me try;

http://www.ham-radio.com/sbms/

--
Mike Knowlton
Panama City Fl.
Dave Glawson <wa6cgr@ham-radio.com> wrote in message
news:38F95976.42E54B93@ham-radio.com...
> Paul,
>
> Please check out "http://www.ham-radio.com/wa6cgr" and
> "http://www.ham-radio.com/sbms". These site are geared toward Microwave
> homebrew, but contain a lot of stuff.
>
> Thanks,
>
> Dave Glawson - WA6CGR
>
> Paul Kelley wrote:
>
> > Howdy folks,
> >
> > I have volunteered to edit the Amateur Radio: Homebrew category
> > (http://www.dmoz.org/Recreation/Amateur_Radio/Homebrew/) in the Open
> > Directory Project (http:/www.domz.org/). If you take a look at the
> > current listings you will see this category needs some additions!
> >
> > If you have or know of a web site that has information on ham radio
> > homebrew, PLEASE send me the URL for review! I am primarily looking
> > for web sites offering project plans/schematics, but will list others
> > if they pertain directly to home construction of ham radio equipment.
> >
> > Thanks...
> >
> > Paul N1BUG
>

3146. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-16 00:00:00 UTC
From: David Green <dgreen17@home.com>
Message-ID: <1%rK4.3949$95.39181@news1.rdc1.mb.home.com>
Source record: 61444
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Joseph Legris wrote:

> >You appear to be confusing electrically large and small
> >antennas.....A short dipole (length << lambda) is not an electrically
> >large antenna. Its Aem is larger than its physical area.
> >
>

Bilge replied:

> Prove it. ....Skip these stupid definitions ....etc.

Mr. Bilge, believe it or not these people are trying to help you. The problem is that until the last day or so, no one understood what you were trying to say.

For the benefit of those who still think that they can explain to you the idea of "energy sucking", here is what Mr. Bilge appears to believe:

1. The maximum power that any antenna can absorb is limited by the flux in watts/meter-squared through the physical antenna.

2. There is a theorem in textbooks which says that the maximum power available to a short dipole is independent of its length.

3. Items (1) and (2) are resolved by a specially-contrived re-definition of a "short-dipole", where the physical width of the antenna grows as its length shrinks, so as to keep its actual area a constant.

4. The proponents of "energy sucking" are cynically ignoring this devious trick of re-defining the width of the antenna in order to make it appear that something peculiar is happening with the energy flow.

Martin Green

3147. Re: Calculation for o/p impeadance of TX?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ddkgo$iv1$1@uranium.btinternet.com>
Source record: 61352

> does anyone know how to calculate the out put impeadance of this
output
> stage of a transmitter operating at approx 410Mhz
============================
Yes. Dead simple. The 15nH inductor is in parallel with the 10pF
capcitor. At 410 MHz they both have the same reactance of 38.7 ohms.
Their resulting parallel impedance is therefore extremely high.

Thiis leaves the impedance looking back into amplifier equal to
whatever the impedance is looking back into the transistor collector.
Your transistor manufacturer's data book will tell you that. It also
depends on the transistor's operating angle, class A. B or C. But
usually the transistor's internal impedance is high enough for the
device to be described as a current source. That is, its impedance is
very much higher than the amplifier's external load impedance.

Why do you want to know ? It doesn't usually matter very much.

Reg, G4FGQ

3148. Schematic wtd. for Sylvania #EC4001 BKO

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: b4053@my-deja.com
Message-ID: <8de2r8gip1@nnrp1.deja.com>
Source record: 61353

Wondering if anyone has the schematic for a Sylvania stereo system,
model #: EC4001 BKO.
If so, Please let me know.
Thanks,
-Steve

Sent via Deja.com http://www.deja.com/
Before you buy.

3149. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: k7itm@aol.com.nospam
Message-ID: <20000416233248.24405.00000809@ng-fc1.aol.com>
Source record: 61354

Larry, K8UT, wrote:

>I had to do something similar once, and needed a DC dummy load (but for a
>13.8 volt system). I ended up using a parallel string of discontinued
>automotive headlamps that I bought cheap from a local auto parts store (they
>were happy to get rid of them; I was happy to get them). By wiring both the
>standard and high beam filaments, I had a pretty effective dummy load for
>high currents. You'd need to put them in series/parallel for 28 volts. This
>is NOT a constant current load, just a BIG resistor. If you need it to sink
>constant current, you could put some current limiting transistors in the
>path.

Actually, incandescent lights are a lot closer to a constant current load than a standard resistor. The resistance rises as the temperature increases, so they make a pretty decent cheap "constant current" load.

One could also do it with lots of copper wire, as someone else noted. You can get 250 foot rolls of 12AWG "two conductor plus ground" house wiring cable for around $20 here in the US these days. It should be pretty safe to parallel two of the conductors, if you don't leave it tightly coiled, and put 20 amps through each. 250 feet of #12 should get you about 0.4 ohms; two in parallel would be 0.2 ohms. 40 amps is pushing it for a single conductor, but might be OK if you had the wire stretched out in free air: it's rated for 20 amps inside insulated walls. But 40 amps is FOUR times the power dissipation per foot.

Cheers,
Tom

3150. Re: dummy load - power dissipation question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: lrbety@aol.com
Message-ID: <20000417021308.25128.00002172@ng-cb1.aol.com>
Source record: 61355

Maybe trying to tune SWR below 1.1 to 1 is like polishing the lug nuts on a race car wheel in an attempt to make it go faster.

David

3151. Re: Needed heavy duty resistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: lrbety@aol.com
Message-ID: <20000417022109.25128.00002173@ng-cb1.aol.com>
Source record: 61356

Todd,

I don't have anything like you want but I would suggest you investigate something like no. 14 wire and wind your own.

Your problem is something like my microwave problem. Some years ago I read an article that made me realize that microwaves were measured with a pocket ruler instead of a 100' tape ruler but was well within my grasp.

Good luck on your project.

David

3152. Re: WTB: Capacitor 40/40/40/40uF @500V Can Type Cap or similar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: lrbety@aol.com
Message-ID: <20000417023131.25128.00002174@ng-cb1.aol.com>
Source record: 61357

The only place I have seen caps like this advertised is Antique Electronic Supply - 408-820-4643 or at www.tubesandmore.com.

David

3153. Re: HELP HV POWER SUPPLY (AMP)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sfl47i43ivv127@corp.supernews.com>
Source record: 61358
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

In article <J8XH4.10563$ei.378487@bgtnsc04-news.ops.worldnet.att.net>,
W5IDX@worldnet.att.net says...
>
>I Have A Few Question In Repairing A HV Power Supply For An Amplifier
(4)
>572B
>The Original Caps Are 100uf. (500 Volt) 8 In Quantity
>
> 1: If I Used 450uf What Would Happen. ?
> 2: What Do You Suggest. ?
> 3: Would Quality Of The Output Be Degraded ?
>
>Thank You W5IDX
>W5IDX@ qsl.net
>
>
>
>
Obviously you meant to say 450volt units, not 450mfd,
as a 450mfd@500v is non-existant.

the 450 volt units will work fine for you.

3154. W.T.B. Single sided PCB

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Wayne Strickland <w9bbb@megsinet.net>
Message-ID: <38FB0BD6.87144DD5@megsinet.net>
Source record: 61359

Hi, I'm looking for some sheets of Printed circuit brds.Small Quanity.
G-62 type.Wayne

3155. Re: ISO - PE/IE QRP Rig Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Randy L Henderson <randylh@flash.net>
Message-ID: <38FB496C.63BC@flash.net>
Source record: 61360

Cestyll O. Dywod, esq. wrote:
>
> Sometime in the mid to late 60s (perhaps 67-68?), there was a
> construction article in either Popular Electronics or Electronics
> Illustrated (I'm leaning towards Pop'tronics) for a two transistor
> (2N3053s???) QRP rig on 80 Meters. It may even have been the cover
> article. It was point to point wired in a 3x4x5" Bud box, rather than
> PCB. It used miniductor coils and I recall that there was a metal
> particial in the middle of the box with the Osc on one side and the PA
> on the other.
>
> If someone can point me towards the Month/Year of that article, or has a
> copy of the magazine, I would greatly appreciate getting a copy.
>
> Thanks!
>
> 73, Dave
>
> Dave Williams - K7HMP
> Stafford, Virginia

Hi Dave,

I remember the article because I considered building it when I was first licensed. That should mean it came out in 64 or 65.
My Elmer supplied me with a homebrew transmitter that worked well so I didn't attempt it. Anyway, I think it was published in Popular Electronics. Newer designs in books such as SOLID STATE DESIGN FOR THE RADIO AMATEUR would probably work better. Of course you may have other (nostalgic?) reasons for building it. Unfortunately, I don't know where to find a copy. 73

Randy Henderson, WI5W

3156. Help with Eimac chimney and tube part nos.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: pacqrat <toomuchstuff@pobox.com>
Message-ID: <92HK4.58448$q67.803694@newsread2.prod.itd.earthlink.net>
Source record: 61361
Cross-posted to: alt.ham-radio.hf,alt.ham-radio.marketplace,alt.ham-radio.mods,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

I have a pair of brand new Eimac SK-416 chimneys FS. Not listed at Richardson or Eimac. What tube do they fit? I also have a good, smaller Eimac tube with the marking worn off. Only "8645" is still visible. Is this a 4-400 or what? I can't find that number listed anywhere. Both are FS. Chimneys $50/pr. toomuchstuff@pobox.com

3157. TCS transmitter wanted...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Old Man <ebjr@i-55.com>
Message-ID: <7_IK4.134598$AT6.173199@dfw-read.news.verio.net>
Source record: 61362
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Looking for a Navy TCS transmitter that is complete and hasn't
been butchered. Do not need power supply.

73,

Sandy W5TVW

3158. Re: How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <38FB6248.3E2C@ixpres.com>
Source record: 61363

J M Noeding wrote:
>
> A friend told me that his 6HF5's (Galaxy V mk2) lasted 18 years and
> were only down to 80% power. Suppose 6JB6 and 6JS6 last just as long
> provided you don't sit on the key when tuning.
>
> wonder how long 6146B's will last in a transceiver for an active
> amateur, working at least a few QSO's every week and several contests
> on ssb or cw during the year? Mine has lasted 10 years, but I am not
> so active. Japanese transceivers includes a switch to disconnect
> heater voltage when one do not intend to transmit
>
> Once suggested - as a joke - to QST Hints & Kinks, that great
> improvement could be achieved by installing a termometer in the PA
> compartment. I made several statements as to economical improvements
> and cost reductions (seems to be very important arguments in America)
> - just to underline the joke, but ARRL staff didn't understand that it
> was a joke, hi (maybe a great idea to do, but rather impractical to
> do)
>
> 73
> Jan-Martin
> LA8AK

Jan OM,
My TS820 is now about 25 years old. I bought it new. I work only CW,
and Amtor/Pactor ARQ FSK. It has thousands of hours on it now, with all
original 12BY7 amd 6146 tubes. I average about 8-10 hours a week on
the air. Amateur service is normally so light that tubes can last a
lifetime with care. In my opinion, many if not most tubes are
unnecessarily replaced in amateur gear.

73 and GL,
Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

3159. A mailing list for armyradio collector/users:

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Patricia Gibbons <wa6ube@tactical-link.com>
Message-ID: <8dfqkg$v3c$1@slb2.atl.mindspring.net>
Source record: 61364
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

You may want to subscribe to the armyradios mailing list
if you are into military radio sets ..
see:

http://www.onelist.com/community/armyradios

Trish
--
Patricia E. Gibbons & Carla Satra
Tactical Link Systems
<http://www.tactical-link.com>
see my comvan at:
<http://www.qrz.com/callsign.html?callsign=wa6ube>
.....
My Public Key is available at:
<http://pgp5.ai.mit.edu:11371/pks/lookup?op=vindex&search=0xEDECB44F>
Key ID: 0xEDECB44F
This key is RSA, NOT Diffie-Hellman !!

Old Man <ebjr@i-55.com> wrote in message
news:7_IK4.134598$AT6.173199@dfw-read.news.verio.net...
> Looking for a Navy TCS transmitter that is complete and hasn't
> been butchered. Do not need power supply.
>
> 73,
>
> Sandy W5TVW
>
>

3160. Re: Wanted: Icom IC-255A Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Brian <schousek@yahoo.com>
Message-ID: <8dfrv7prj1@jair.pressenter.com>
Source record: 61365

William-

I own the manual along with a copy of a QST article from way back showing how to do computer control. Send me an email w/your address and I can get them to you.

Brian
KB9TBB

"William Phinizy" <k6whp@gte.net> wrote in message news:sSlK4.2067$hA6.376678@dfiatx1-snr1.gtei.net...
> I am looking for an operator's manual for the old Icom IC-255A. I will
> be happy to pay duplication and postage fees.
>
> Thanks in advance..
>
> Bill.
>
>

3161. Re: Help with Eimac chimney and tube part nos.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Lasse Moell <lasse.moell@swipnet.se>
Message-ID: <gp1nfsc012qgjhhca3d4667mlq195om4mr@4ax.com>
Source record: 61366

Sounds like a datestamp on the tube..... 1986 and week 45, so I would
guess 3-500z if it fits the SK-416....

BTW why x-post to 9 groups??
On Mon, 17 Apr 2000 16:34:13 GMT, "pacqrat" <toomuchstuff@pobox.com>
wrote:

>I have a pair of brand new Eimac SK-416 chimneys FS. Not listed at
>Richardson or Eimac. What tube do they fit? I also have a good, smaller
>Eimac tube with the marking worn off. Only "8645" is still visible. Is this
>a 4-400 or what? I can't find that number listed anywhere. Both are FS.
>Chimneys $50/pr. toomuchstuff@pobox.com
>

3162. Re: How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38fb7a00.19961382@news.online.no>
Source record: 61367

On Mon, 17 Apr 2000 12:13:12 -0700, Don W6JL <W6JL@ixpres.com> wrote:

>
>Jan OM,
> My TS820 is now about 25 years old. I bought it new. I work only CW,
>and Amtor/Pactor ARQ FSK. It has thousands of hours on it now, with all
>original 12BY7 amd 6146 tubes. I average about 8-10 hours a week on
>the air. Amateur service is normally so light that tubes can last a
>lifetime with care. In my opinion, many if not most tubes are
>unnecessarily replaced in amateur gear.
>
> 73 and GL,
> Don, W6JL
>
pleased to read this, OM. It is also my experience that - provided you
know how to treat it - the tubes will last.
I've been called by several amateurs who have bought some tube type
equipment, and demand spare tubes, an owner of Drake R-4C demanded
twice the amount of tubes that was in the receiver, but of course I do
not help fools
it is just rididculous, they don't know what the device is, I have lot
of ex-German equipment with over 60 years old tubes, many has been in
service since 1940-42, and for my old Drake 2-B I only replaced 6BE6
and another type for the first 10 years of use

73 jan-martin

3163. ARRL HBK98 LPF/HPF program

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38fb7f36.21295189@news.online.no>
Source record: 61368
Cross-posted to: rec.radio.amateur.homebrew,de.comm.ham

downloaded some very useful filter calculation programs from ARRL some
years ago, but recently I couldn't find them. Are such programs still
available at ARRL site? Some more programs followed the diskette for
the ARRL 96'handbook, but also collected some later programs

73
Jan-Martin
LA8AK

3164. Re: How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8fn566.iqc.X@animas.frontier.net>
Source record: 61369

On Mon, 17 Apr 2000 12:13:12 -0700, Don W6JL scribbled:
>J M Noeding wrote:
>>
>> wonder how long 6146B's will last in a transceiver for an active
>> amateur, working at least a few QSO's every week and several contests
>> on ssb or cw during the year? Mine has lasted 10 years, but I am not
>> so active. Japanese transceivers includes a switch to disconnect
>> heater voltage when one do not intend to transmit
>>
>Jan OM,
> My TS820 is now about 25 years old. I bought it new. I work only CW,
>and Amtor/Pactor ARQ FSK. It has thousands of hours on it now, with all
>original 12BY7 amd 6146 tubes. I average about 8-10 hours a week on
>the air. Amateur service is normally so light that tubes can last a
>lifetime with care. In my opinion, many if not most tubes are
>unnecessarily replaced in amateur gear.

When they do go 'soft' on you -- you'll see it first and most
dramatically on 10M first. I've spent most of the last decade
on 40M and 15M with my TS-520. Last year, as the sun spots allowed,
I went up to 10M and started having fun there, too -- but,
getting no more than 10 watts, or so, out of the 6146's.
I still have 'reasonable' power out on 15M, and 'full' power out
on 40M -- but it's now QRP on 10M.
Which is ok -- QRP works just fine on 10M when it's open.

Jonesy W3DHJ

--
Marvin L Jones jonz--AT>>frontier.net | W3DHJ
Gunnison, Colorado | Jonesy
7,703' -- 2,345m | DM68mn

3165. Thanks ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Jimi Greydog <ringlord@earthling.net>
Message-ID: <8gkmfsg7o8q740343bjh099853omav6op3@4ax.com>
Source record: 61370

Hello, all..

Thanks to all who reponded with the great information on QRP things
and for the helpful tips on the code learning miseries...

It will take me a while (after I passed 50 my learning curve dropped
waaaay off) but I will be tapping at ya in morse, eventually ... (I
hope before the end of the decade... hah, hah...)

Thanks all..

I do appreciate it...

Jimi Greydog

73 de KC7SVQ

3166. Re: How long last 6146B in regular use?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Bob <bmiller@calweb.com>
Message-ID: <38fbc82e_2@news3.calweb.com>
Source record: 61371

I an using the original Tungsol 6550s in my Central 100V (circa 1958-59) which I used for years in long winded key down RTTY. The secret to that unit's tube's survival was the Screen Grid overload relay that would kill the screen voltage anytime the PA was abused by a nasty VSWR or overload or what ever. A simple scheme that would save the lives of many tubes if used. Of course the 6550 with 35 watts of plate dissipation also contributed to its long life as well. Not a 6146, but out of the same 6L6 family.

73
Bob, KE6F

Don W6JL <W6JL@ixpres.com> wrote in message news:38FB6248.3E2C@ixpres.com...
> J M Noeding wrote:
> >
> > A friend told me that his 6HF5's (Galaxy V mk2) lasted 18 years and
> > were only down to 80% power. Suppose 6JB6 and 6JS6 last just as long
> > provided you don't sit on the key when tuning.
> >
> > wonder how long 6146B's will last in a transceiver for an active
> > amateur, working at least a few QSO's every week and several contests
> > on ssb or cw during the year? Mine has lasted 10 years, but I am not
> > so active. Japanese transceivers includes a switch to disconnect
> > heater voltage when one do not intend to transmit
> >
> > Once suggested - as a joke - to QST Hints & Kinks, that great
> > improvement could be achieved by installing a termometer in the PA
> > compartment. I made several statements as to economical improvements
> > and cost reductions (seems to be very important arguments in America)
> > - just to underline the joke, but ARRL staff didn't understand that it
> > was a joke, hi (maybe a great idea to do, but rather impractical to
> > do)
> >
> > 73
> > Jan-Martin
> > LA8AK
>
> Jan OM,
> My TS820 is now about 25 years old. I bought it new. I work only CW,
> and Amtor/Pactor ARQ FSK. It has thousands of hours on it now, with all
> original 12BY7 amd 6146 tubes. I average about 8-10 hours a week on
> the air. Amateur service is normally so light that tubes can last a
> lifetime with care. In my opinion, many if not most tubes are
> unnecessarily replaced in amateur gear.
>

> 73 and GL,
> Don, W6JL
>
> --
> ��□�

3167. Re: A crude power supply

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Will <catroach@mindspring.com>
Message-ID: <38FBFA72.7C9AE5A8@mindspring.com>
Source record: 61372

Save your inspector the coronary: howsabout 4 12V batteries in series?

de Will KD7BFX

"Bill Turner, W7TI" wrote:

> guest@host.com wrote:
>
> >I'm going to need about a 48v dc supply to power some relays for
> >antenna switching. I do not want to use a transformer. Can I use a
> >combination of resistors and some diodes to get some crude dc from the
> >110v ac enought to power 1 relay at a time.
> >
> >email jprocyk@direct.ca
> ____
> Yes, but your local building inspector would have a heart attack if he
> ever saw it. I strongly recommend using a transformer.
>
> Bill, W7TI

3168. Re: I envy you folks;

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-17 00:00:00 UTC
From: Will <catroach@mindspring.com>
Message-ID: <38FBFC71.E84EAF0B@mindspring.com>
Source record: 61373

Have you considered homebrewing with tubes/valves? Lots of interesting circuits out there, you name it, short of a DSP black box. That solves your small component nightmare! Let me/us know what you are interested in building and maybe I/we can refer you to some interesting plans and schematics!

de Will KD7BFX

ve6xtc@ecn.ab.ca wrote:

> I sure wish I had good sight. There are so many projects which
> I'd absolutely love to build but my sight is extremely poor. I often save
> old parts and hope that I can find a friend to build stuff for me. It's
> hard to do since far too few hams build stuff. If I had 20/20 sight, my
> soldering iron would never be cold. If you can, please volunteer to help
> white caners build cheap and effective home brew equipment.
> Yours,
>
> Bruce Atchison, electronic musician, freelance writer, and rabbit fanatic.
> ve6xtc@freenet.edmonton.ab.ca

3169. Rare Millen Panel Dial for auction on Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <38FBAE97.18C0D22@home.com>
Source record: 61374

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=307324296

3170. 4kvdc hv capacitor for auction on ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <38FBAEE1.4D909258@home.com>
Source record: 61375

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=307359784

3171. Amplifier/power supply parts for auction on ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <38FBAF63.A176BC03@home.com>
Source record: 61376

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=307397830

3172. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Woody White <woody.white@att.net>
Message-ID: <38FBBA19.809BE91D@att.net>
Source record: 61377

FWIW (Since this technique works best for solid
conductors...)
Use the flat jaws of needle nose pliers to crunch the
insulation. It will (cold flow) seperate at the contact
lines. Peel back the two flaps and snip off.
Woody

NEW web site format!.....NEW site
address!

Ham Homebrew/ATV Circuits...Scanning Electron Microscope
Images

http://woody.white.home.att.net ...de Woody,
WB4QXE

3173. Re: Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: tusunov@my-deja.com
Message-ID: <8dh791$v53$1@nnrp1.deja.com>
Source record: 61378

In article <8d4t9ths1@nonews.col.hp.com>,
Derek Toeppen <derekt@rosalie.col.hp.com> wrote:
> I am looking for the names of a few low cost manufactures of
> double sided, low volume PCB's. Any recommendations?
>
> Thanks
>
> Derek Toeppen
> WA0ZTI
> derek_toeppen@agilent.com
>

Hi Derek,

check http://run.to/pcb

we make double side PTH, FR-4 1,6 mm (0,062") 160x100 mm (6,3x3,9")
prototypes with solder mask and silkscreen component mark for only
$26,00 in single quantity. shipment in 3-5 working days

Tsvetan

Sent via Deja.com http://www.deja.com/
Before you buy.

3174. Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: "John C. Ko" <n2fno@att.net>
Message-ID: <eNXK4.22455$WF.769995@bgtnsc04-news.ops.worldnet.att.net>
Source record: 61379

Hello, all.

I have Astron RS-20A Power Supply.
Ever since I acquired this P/S, it produces 60 Hz HI-FI audio.

I even have changed its positions, ex. upside-down, sideside up, but nothing helps.
After open up the case, I have found out that revets holding Transformers are loosened a little bit.

I have sent numerous E-Mail to Astron, they remain in silence.

Anybody knows how to stop this noise ? It really is annoying when working on Midnight DX specially.

Thanks in advance.

John / N2FNO
n2fno@qsl.net

3175. Re: How to kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <M3YK4.11337$PV.752838@bgtnsc06-news.ops.worldnet.att.net>
Source record: 61380

Get a half gallon of varnish from an electric motor shop. (They dip motors
with windings in it
to lock things in place) Dip your transformer in it and bake it at 300
degrees for 45 minutes..
(Send the wife on a long shopping trip) I have used this to quiet
saturating core inductors.
If the transformer is that noisy I would lean on Astron and try to get them
to give you a new
transformer.

--
Mike Knowlton
Panama City Fl.

3176. Re: Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000418100135.06033.00004857@ng-ch1.aol.com>
Source record: 61381

>Anybody knows how to stop this noise ? It really is annoying when working on
>Midnight DX specially.

This technique doesn't sound or look very sophisticated, but often works. With a medium sized hammer, while the transformer is buzzing, give it a tap on a corner. If no effect try another corner until you hear the noise decrease. Keep tapping and you may find it goes away. It's an old techie trick that often works.

Doug Moore

3177. Re: Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8dhsvbmlv1@nnrp1.deja.com>
Source record: 61382

In article <eNXK4.22455$WF.769995@bgtnsc04-news.ops.worldnet.att.net>,
"John C. Ko" <n2fno@att.net> wrote:
> Hello, all.
>
> I have Astron RS-20A Power Supply.
> Ever since I acquired this P/S, it produces 60 Hz HI-FI audio.
>
> I even have changed its positions, ex. upside-down, sideside up, but
nothing
> helps.
> After open up the case, I have found out that revets holding
Transformers
> are loosened a little bit.
>
> I have sent numerous E-Mail to Astron, they remain in silence.
>
> Anybody knows how to stop this noise ? It really is annoying when
working on
> Midnight DX specially.
>
> Thanks in advance.
>
> John / N2FNO
> n2fno@qsl.net
>
>

There are two types of 60 Hz hum from a transform. The first is due internal plates vibration and can be cured as indicated in this thread with varnish, enamel (I've used colophony rosin with great success but you must be very careful when melting it because it is highly inflammable). The second type is due external ferromagnetic material vibration into the magnetic field from the transformer. This is easily cured by dumping the vibration or by keeping the transformer away from iron sheets and plates.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3178. W8MMQ web site

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Daniel Hicks <email@w8mmq.net>
Message-ID: <38fc775e$1$5040$2c3edae7@news.voyager.net>
Source record: 61383

```
Visit the W8MMQ web site at
http://www.w8mmq.net/

or check out the recently-updated radio mods library,
http://www.w8mmq.net/mods/
```

3179. a kenwood ts-850 sat for 5 US $

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: 14MI63 <14mi63@caramail.com>
Message-ID: <8di06f$i7c$3@wanadoo.fr>
Source record: 61384

Hi every body
i m doing a big tombola
You can win my kenwood TS- 850 SAT for only 5 US $
If you are interested to have a kenwood rig for only 5 US $
go to my site :
http://14mi63.virtualave.com
the transaction is securised and you a have 2 days for change your mind

It' s a good deal for you and for me ...
thank's to read this mail
for more information you can write me to : 14mi63@caramail.com

3180. Re: ARRL HBK98 LPF/HPF program

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Uwe Zingler <Uwe.Zingler@AZ-Electronic.de>
Message-ID: <8di54a$8f2$1@news02.btx.dtag.de>
Source record: 61385
Cross-posted to: rec.radio.amateur.homebrew,de.comm.ham

Hi Jan,
i have found it:

http://www.arrl.org/notes/hbk/hbk98.zip

"J M Noeding" <LA8AK@online.no> schrieb im Newsbeitrag
news:38fb7f36.21295189@news.online.no...
> downloaded some very useful filter calculation programs from ARRL some
> years ago, but recently I couldn't find them. Are such programs still
> available at ARRL site?

73 de Uwe

3181. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: David L Quinlan <ergot@hicom.net>
Message-ID: <38FCC7D3.D7637B8B@hicom.net>
Source record: 61386
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

I have the Singer/Kearfott "ultrasonic"spectrum analyser. Kearfott was in my back yard at one time, in . New Jersey that is. I received a similar request a few weeks ago, if theis a duplicate message please disregard it. David Quinlan.

John Mackesy wrote:

> I'd like to hear from users of the Singer/Panoramic MF5/CA5 RF Spectrum
> Analyzer, also from anyone who operates or has data for a Singer/Panoramic
> REC-1 Receiving Converter.
>
> I have 2 x MF5/CA5 (also known as SSB-50) 1 early model (has its problems)
> and 1 late model. The later equip't looks and performs like new. I also have
> 2 x RF-7a VFOs, and 1 REC-1, and doc for everything EXCEPT REC-1.
>
> Thanks,
>
> John Mackesy VK3XAO

3182. Re: A mailing list for armyradio collector/users:

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38fcca2c.106034613@news.online.no>
Source record: 61387
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

On Mon, 17 Apr 2000 13:00:31 -0700, "Patricia Gibbons"
<wa6ube@tactical-link.com> wrote:

>You may want to subscribe to the armyradios mailing list
>if you are into military radio sets ..
>see:
>
>http://www.onelist.com/community/armyradios
>
>Trish

I'm certainly not collecting Motorola DSP type transceivers. This is
the noisiest newsreflector I've ever tried, and when most of the posts
are concerned about recent equipment it seems better to unsubscribe
ASAP and leave the reflector for the appliance operators needing info
for complex solidstate blackboxes

Jan-Martin
LA8AK

3183. FS: Philips Audio Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: John Grow <jgrow@sympatico.ca>
Message-ID: <uw4L4.37935$2D6.1239960@news20.bellglobal.com>
Source record: 61388

Phillips Audio Generator, commerical built unit, uses small 7 pin tubes.
Very nice shape, nice smooth tuning. Why build one. Only $ 25.00 plus $ 8.50
shipping CONUS. John

3184. Just what is PNP blue? was Re: PC Board construction / Inkjet printers?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: neep.neep@acme.com
Message-ID: <q5kpfs0nt0eh7hlica4ngorms99r0403nc@4ax.com>
Source record: 61389

I got good results with Press-n-Peel Blue. One question:

Just what is the stuff made out of? It has a smell that is
familiar from somewhere, but I just can't place it. Any
ideas?

73..Jim N2VNO

3185. Re: Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8dilma$9k9$1@campus3.mtu.edu>
Source record: 61390

py1ll@my-deja.com wrote:
> The second type is due external ferromagnetic material
> vibration into the magnetic field from the transformer. This is easily
> cured by dumping the vibration or by keeping the transformer away from
> iron sheets and plates.

--> Funny story related to this: I was working on a Drake TR-4. I'd just taken the bottom cover off and reconnected the power supply to do some voltage checks. Switched on the power and got a loud "CLANG!!!" Startled the heck out of me! Once my heart rate had gone back down, I realized I'd left the cover lying loose on top of the supply, and the strong magnetic field created by the hefty inrush current had vibrated it.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Jazz musicians say only the most adoring things about one another; actors, generally the same. Only writers claw and spit, even though nobody cares but other writers, and public opinion of the attackee is affected not at all." -- Roger Rosenblatt

3186. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: "Henry A. Kolesnik" <wd5jfr@tulsa.oklahoma.net>
Message-ID: <38FCEFF3.E724DBE8@tulsa.oklahoma.net>
Source record: 61391
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

about 3 years ago at a hamfest which i can't remember i bought..
a MF-5, UR-3, TTG-3, RF-8, and REC-2..
but didn't get any docs..
i've been too busy to try to find them but will one of these days..
i hope to retire in about 3 years and then will have more time to search for
boatanchor docs..
i've been to aus about 20 times and lived in sydney for about 9 months..
if you don't have any luck keep my info and keep in touch..
cheers
hank wd5jfr

John Mackesy wrote:

> I'd like to hear from users of the Singer/Panoramic MF5/CA5 RF Spectrum
> Analyzer, also from anyone who operates or has data for a Singer/Panoramic
> REC-1 Receiving Converter.
>
> I have 2 x MF5/CA5 (also known as SSB-50) 1 early model (has its problems)
> and 1 late model. The later equip't looks and performs like new. I also have
> 2 x RF-7a VFOs, and 1 REC-1, and doc for everything EXCEPT REC-1.
>
> Thanks,
>
> John Mackesy VK3XAO

3187. Need help with NHRC4 controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: "L.K." <wa5kbq@yahoo.com>
Message-ID: <38FCF5CC.65082AAE@yahoo.com>
Source record: 61392

I have a strange situation. Quite a while back I purchased an NHRC-4 repeater controller kit. It sat on the shelf for quite a while waiting to be used. I recently started construction and discovered the PIC processor is blank!

Does anyone happen to have the binary image or Intel Hex file for this chip?

Larry

3188. Re: Mirage amplifier with an IC-701PS / IC-PS20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <38FD2C0A.478670B4@oio.net>
Source record: 61393
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Chris,
I wouldn't worry about the 18v, which may seem high
to you. Remember, this is a nonregulated power supply,
the 'idle' voltage will be higher than 'normal'. The
voltage under load will be down around 13 volts give or
take a fraction or two. Normal behavior for Icom power
supplies.
'Doc

3189. ISO Uniden AMX350 Power Supply schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-18 00:00:00 UTC
From: Donald Smith <desmith@innercite.com>
Message-ID: <38FD4CCE.E3DB4912@innercite.com>
Source record: 61394
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

Good evening. Might anybody out there have a schematic for a Uniden AMX350 Power Supply. I need the regulator circuitry mostly. Thanks Don KB6GQA

3190. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38fd07f1.121849697@news.online.no>
Source record: 61295
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

On Tue, 18 Apr 2000 18:29:55 -0500, "Henry A. Kolesnik"
<wd5jfr@tulsa.oklahoma.net> wrote:

>about 3 years ago at a hamfest which i can't remember i bought..
>a MF-5, UR-3, TTG-3, RF-8, and REC-2..
>but didn't get any docs..
>i've been too busy to try to find them but will one of these days..
>i hope to retire in about 3 years and then will have more time to search for
>boatanchor docs..
>i've been to aus about 20 times and lived in sydney for about 9 months..
>if you don't have any luck keep my info and keep in touch..
>cheers
>hank wd5jfr
>
seems to be completely impossible to obtain docs for Singer equipment.
A friend working for the navy told me they tried for years to get
maintenance docs for UHF and SHF signal generators, but no result, not
even negative reply. Perhaps only the army is still stupid enough to
buy such equipment on several occasions?

73
jan-martin
LA8AK

3191. kenwood for 5 us$ error in the url

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: 14MI63 <14mi63@caramail.com>
Message-ID: <8dj9vnpml1@wanadoo.fr>
Source record: 61296
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

there was an error in my last msg , the good url for my tombola is
http://14mi63.virtualave.net
Hi every body
You can win my kenwood TS- 850 SAT for only 5 US $
If you are interested to have a kenwood rig for only 5 US $
go to my site :
http://14mi63.virtualave.net
the transaction is securised and you a have 2 days for change your mind

It' s a good deal for you and for me ...
thank's to read this mail
for more information you can write me to : 14mi63@caramail.comkenwood for 5u

3192. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: John Mackesy <mack@melbpc.org.au>
Message-ID: <8djb8vcro1@possum.melbpc.org.au>
Source record: 61297
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

Jan-Martin,

Panoramic/Singer have been out of business for quite a few years now. I'm
told this was due to their being swallowed up in a series of corporate
merger/acquisitions. I'd really like to get the full story one of these
days.I got a manual for my MF-5/CA5-1 (SSB 50 system) from Manual Merchant
(Thanks, Linda Perkins!).

I've seen manuals for the HF systems avail from the usual vendors.

73,

John Mackesy

> seems to be completely impossible to obtain docs for Singer equipment.
> A friend working for the navy told me they tried for years to get
> maintenance docs for UHF and SHF signal generators, but no result, not
> even negative reply. Perhaps only the army is still stupid enough to
> buy such equipment on several occasions?
>
> 73
> jan-martin
> LA8AK

3193. Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Fritz Sonnichsen <sonnichs@berkshire.net>
Message-ID: <01bf841a$ceecba20$1772ba8c@ivy.bcbsrony.co>
Source record: 61298

I am working with an engineering department here, and we are trying to develop, for the lab, a Marconi or spark sending unit for demonstration purposes. We have sucessfully built a coherer and transmitted high voltage sparks generated signals across a few feet. We would be interested in hearing from anyone who has either theoretical information or practical experience in building, early Marconi or spark sending units.

Cheers
Fritz (AA2OP)

3194. Mirage amplifier with an IC-701PS / IC-PS20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: N4JOY <cvanderk@earthlink.net>
Message-ID: <SlbL4.42939$y4.1542534@newsread1.prod.itd.earthlink.net>
Source record: 61299
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi, I own an IC-PS20 nonregulated power supply rated at 18 VDC / 20A -- I would like to use this with my 2 Meter Mirage amplifier (13.8 VDC / 15A) -- does anyone have any suggestions on stepping down the voltage?

Thanks,

Chris

3195. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <38fd80c2.4486999@news.eunet.yu>
Source record: 61300
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

3196. Re: Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: "John C. Ko" <n2fno@att.net>
Message-ID: <NEgL4.12661$PV.867280@bgtnsc06-news.ops.worldnet.att.net>
Source record: 61301

What I have found out are ;

1) The transformer was NOT treated with any kind of enamel or etc...
2) 4 bolts hold transformer core together was not tightened enough.
3) There were no way to tighten the front panel to top cover. When
transformer vibrates, the front panel amplifies its signal.

I finally made to attenuate 60Hz HiFi audio at least 60 db after 30 min.
labor.

1) tightened the 4 bolts (do not over tight !, they used cheap bolts and
nuts.)
2) Drill out rivets and replace them with rubber washer (radio shack
parts), bolts and nuts.
3) fill the front panel gap with weather sponge tapes (HomeDepot parts).

I thank you again for all great ideas posted here.

Regards,

John / N2FNO
n2fno@qsl.net

John C. Ko <n2fno@att.net> wrote in message
news:eNXK4.22455$WF.769995@bgtnsc04-news.ops.worldnet.att.net...
> Hello, all.
>
> I have Astron RS-20A Power Supply.
> Ever since I acquired this P/S, it produces 60 Hz HI-FI audio.
>
> I even have changed its positions, ex. upside-down, sideside up, but
nothing
> helps.
> After open up the case, I have found out that revets holding Transformers
> are loosened a little bit.
>
> I have sent numerous E-Mail to Astron, they remain in silence.
>
> Anybody knows how to stop this noise ? It really is annoying when working
on
> Midnight DX specially.
>
> Thanks in advance.
>
> John / N2FNO
> n2fno@qsl.net

>
>
>

3197. Re: Wanted: "QRP Power"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <2kiL4.1$1d.1528@bos-service2.ext.raytheon.com>
Source record: 61302

In article <38FA53B7.1E6D84D9@ica.net>, hduff@ica.net says...
>
>Anyone have a copy of "QRP Power" (ARRL) they'd like to sell ?
>Please rpely by e-mail.
>Thanks

This book is still in print. AES sells it for $12.00

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

3198. Re: Mirage amplifier with an IC-701PS / IC-PS20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: N4JOY <cvanderk@earthlink.net>
Message-ID: <YGiL4.64528$q67.988579@newsread2.prod.itd.earthlink.net>
Source record: 61303
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

I appreciate the reply -- I called Icom about a week ago to obtain information and the tech mentioned a case of someone damaging their Yaesu rig using this power supply. He also mentioned the rig designed for this supply (IC-701) performed the voltage regulation for 13.8 volts. Should I still be concerned when using this supply with the mirage amp? By the way, I measured the idle voltage at 17.4 volts.

"W5LZ" <w5lz@oio.net> wrote in message news:38FD2C0A.478670B4@oio.net...
> Chris,
> I wouldn't worry about the 18v, which may seem high
> to you. Remember, this is a nonregulated power supply,
> the 'idle' voltage will be higher than 'normal'. The
> voltage under load will be down around 13 volts give or
> take a fraction or two. Normal behavior for Icom power
> supplies.
> 'Doc

3199. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Gary Schafer <gschafer@mediaone.net>
Message-ID: <38FDC1EF.F1A083E3@mediaone.net>
Source record: 61304
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

Singer products were acquired by Eaton Corp about 20 some years ago. Actually I believe another company bought Singer first then Eaton acquired that company. Eaton is a huge company which owns many many companies. Some of the Singer products I believe ar still manufactured. You may have to dig on there site to find the right division.

73
Gary K4FMX

John Mackesy wrote:

> Jan-Martin,
>
> Panoramic/Singer have been out of business for quite a few years now. I'm
> told this was due to their being swallowed up in a series of corporate
> merger/acquisitions. I'd really like to get the full story one of these
> days.I got a manual for my MF-5/CA5-1 (SSB 50 system) from Manual Merchant
> (Thanks, Linda Perkins!).
>
> I've seen manuals for the HF systems avail from the usual vendors.
>
> 73,
>
> John Mackesy
>
> > seems to be completely impossible to obtain docs for Singer equipment.
> > A friend working for the navy told me they tried for years to get
> > maintenance docs for UHF and SHF signal generators, but no result, not
> > even negative reply. Perhaps only the army is still stupid enough to
> > buy such equipment on several occasions?
> >
> > 73
> > jan-martin
> > LA8AK

3200. Re: Mirage amplifier with an IC-701PS / IC-PS20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <38FDD6F7.3C29C0EC@oio.net>
Source record: 61305
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

Chris,
I really don't think it would hurt to use this power
supply with any radio/amp/etc as long as the supply's
current rating isn't exceeded, or approached too closely.
You shouldn't have any problem.
'Doc

3201. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Cortland Richmond <Cortland.Richmond@usa.alcatel.com>
Message-ID: <38FDF73C.F345E8EF@usa.alcatel.com>
Source record: 61306
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

FWIW, the EMI instrument line of Singer was bought by Eaton, then Ailtech,
then Carnel. Which business (Carnel) is for presently for auction on E-Bay.

Te moritiri salutamus!

Cortland
(ka5s@saber.net)

John Mackesy wrote:

> Jan-Martin,
>
> Panoramic/Singer have been out of business for quite a few years now. I'm
> told this was due to their being swallowed up in a series of corporate
> merger/acquisitions. I'd really like to get the full story one of these
> days.I got a manual for my MF-5/CA5-1 (SSB 50 system) from Manual Merchant
> (Thanks, Linda Perkins!).
>
> I've seen manuals for the HF systems avail from the usual vendors.
>
> 73,
>
> John Mackesy
>
> > seems to be completely impossible to obtain docs for Singer equipment.
> > A friend working for the navy told me they tried for years to get
> > maintenance docs for UHF and SHF signal generators, but no result, not
> > even negative reply. Perhaps only the army is still stupid enough to
> > buy such equipment on several occasions?
> >
> > 73
> > jan-martin
> > LA8AK

3202. Re: Howto kill Transformer Noise ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8frvia.aid.X@animas.frontier.net>
Source record: 61307
Body handling: HTML body converted to readable text

On Tue, 18 Apr 2000 18:57:14 -0500, Matt Erickson scribbled:
>
>
>Place a heavy magnet on top of the cabinet, the magent will dampen the
>vibrations , and the magnetic field will dampen the magnetic field put
>out by the transformer.

And, over time, you'll demagnetize the permanent magnet...

And, pse stop posting in ng's with HTML.

3203. Re: Mirage amplifier with an IC-701PS / IC-PS20

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8dkvgk$8kf$1@newcastle.cs.ubc.ca>
Source record: 61308
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

W5LZ <w5lz@oio.net> writes:
>Chris,
> I really don't think it would hurt to use this power
>supply with any radio/amp/etc as long as the supply's
>current rating isn't exceeded, or approached too closely.
>You shouldn't have any problem.

Well, I wouldn't risk it. The difference between 18 V and 13.8 V
is enough that it's possible that something in the radio will be
damaged by 18 V even though it's probably designed to handle 15 V
(13.8 plus some safety margin) forever.

Dave

3204. Re: 2SC2879 ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Paul Robertson <probertson@controltechnology.com>
Message-ID: <38FE0D89.39BCC68D@controltechnology.com>
Source record: 61309

RF Parts stocks them at $37.90 for a matched pair

http://www.rfparts.com/home.html

Ham wrote:

> Looking for a matched pair of 2SC2879 RF power transistors or
> recommendations on where to get them.
> Please reply by e-mail.
> Thanks.

3205. Re: 2SC2879 ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Paul Robertson <probertson@controltechnology.com>
Message-ID: <38FE1074.9FCDBE2E@controltechnology.com>
Source record: 61310

RF Parts has them for $37.90 for a matched pair.
http://www.rfparts.com/home.html

Good luck.

Ham wrote:

> Looking for a matched pair of 2SC2879 RF power transistors or
> recommendations on where to get them.
> Please reply by e-mail.
> Thanks.

--
Paul L. Robertson
865-584-0440
probertson@controltechnology.com

3206. Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Paul Robertson <probertson@controltechnology.com>
Message-ID: <38FE10F9.93DF0C64@controltechnology.com>
Source record: 61311

I need a datasheet for a National Semi LM370.

--
Paul L. Robertson
865-584-0440
probertson@controltechnology.com

3207. CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: HELIO SAKAYA <enatec@worldnet.att.net>
Message-ID: <38FE57A2.10AADF7A@worldnet.att.net>
Source record: 61312

Anyone out there interested in homebrewing with vintage transistors?
Remember superegenerative 10M receiver circuit using surface barrier
transistors?
I'm interested in swaping parts and schematics.
Helio

3208. Re: Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Bill Kirkland <william.kirkland@sympatico.ca>
Message-ID: <38FE46F5.8303EB89@sympatico.ca>
Source record: 61313

suggest you try the National Semiconductor web page. (see note below)
Most manufactures post their data sheets in PDF format.

http://www.national.com/design/

Are you sure you got the part number correct?
I tried searching NS (and the WEB) for LM370 but had no luck

Paul Robertson wrote:
>
> I need a datasheet for a National Semi LM370.
>
> --
> Paul L. Robertson
> 865-584-0440
> probertson@controltechnology.com

3209. Re: Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: "Dana H. Myers K6JQ" <dana@source.net>
Message-ID: <38FE64BA.73504522@source.net>
Source record: 61314

NatSemi doesn't keep sheets for long-obsolete parts online.
Best bet is someone that still has a linear data book from
1980 or so.

Bill Kirkland wrote:
>
> suggest you try the National Semiconductor web page. (see note below)
> Most manufactures post their data sheets in PDF format.
>
> http://www.national.com/design/
>
> Are you sure you got the part number correct?
> I tried searching NS (and the WEB) for LM370 but had no luck
>
> Paul Robertson wrote:
> >
> > I need a datasheet for a National Semi LM370.
> >
> > --
> > Paul L. Robertson
> > 865-584-0440
> > probertson@controltechnology.com

--
Dana K6JQ DoD #j
Dana@Source.Net

3210. FA: 12 key DTMF pads on eBay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Radio Randy <rjones@theofficenet.com>
Message-ID: <J2wL4.1579$_b6.83948@news.uswest.net>
Source record: 61315

Hi gang,

I have 7 of these going as a lot on eBay, starting at $1. See them at:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=313481134

Thanks for looking.

Radio Randy

3211. Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-19 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <A3wL4.5900$lw2.156554@news.corecomm.net>
Source record: 61316

Does anybody know of a source for a roll of teflon tape? I'm looking for just a few mils thick, approximately 1/2 inch wide tape.

Tnx, AL, e-mail alforo@megsinet.net

3212. Re: Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <38fef1bf.526712036@news.igs.net>
Source record: 61317

I now have access to a big data base at my new job..it is called CAPS
and it is a huge CD ROM Database on all sorts of ICs and
Semiconductors. It is put out by IHS (Information Handling Services
Corp) in USA...I can get yoiu the data sheets if you wish..or..check
out the WEB for this company and they will often do a "freebee" for
good will advertising and get you the info you need...73 Earl VE3AB

On Wed, 19 Apr 2000 16:03:05 -0400, Paul Robertson
<probertson@controltechnology.com> wrote:

>I need a datasheet for a National Semi LM370.
>
>--
>Paul L. Robertson
>865-584-0440
>probertson@controltechnology.com
>
>

3213. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <DAtL4.2317$GV5.70998@typhoon2.gnilink.net>
Source record: 61318

Thanks Fellows, but stripping #30 and #28 stranded is sure more difficult
than say #26, #24 stranded and larger? And the other thing I notice is for
the stiffness of the insulation after soldering #30 or #28 onto the
terminal, any lateral movement without a strain relief will shear the
connection pronto if there is the slightest nick on the wire?
So far, crushing the insulation, nicking it from behind, then pulling, seems
to work the best with the small stuff. Larger wire is simply no problem, in
pulling the teflon off with the Miller stripper as Brad mentioned. I think
that I will stay away from the heat method for the lack of ventilation?
.....Ed W, K3FDY.

Woody White wrote in message <38FBBA19.809BE91D@att.net>...
>
>FWIW (Since this technique works best for solid
>conductors...)
>Use the flat jaws of needle nose pliers to crunch the
>insulation. It will (cold flow) seperate at the contact
>lines. Peel back the two flaps and snip off.
>Woody
>---
>NEW web site format!.....................NEW site
>address!
>
>Ham Homebrew/ATV Circuits...Scanning Electron Microscope
>Images
>
>http://woody.white.home.att.net ...de Woody,
>WB4QXE

3214. Re: Capacitor 40/40/40/40uF @500V Can Type Cap or similar

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: todd@amprepair.com
Message-ID: <8dm4jg$qd9$1@slb6.atl.mindspring.net>
Source record: 61319
Cross-posted to: rec.ham-radio.swap,rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap,rec.radio.swap,sci.electronics.components,sci.electronics.equipment,sci.electronics.parts

Check with Antique Electronic Supply in Tempe Arizona. If no luck there we
can get you some.
Todd @ Nashville Amp Service

Please visit our website: www.amprepair.com

Groovy Toones <groovy_toones@hotmail.com> wrote in message
news:AviK4.4266$4W3.67173@typhoon.nyroc.rr.com...
> Hi there
> I am looking to buy a few multisection can type caps
> for tube guitar amps that blew their caps
>
> 40/40/40/40 uF @500V or similar capacitance
>
> thanks!!!
> please email me
>
>

3215. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: sbishay@mindspring.com
Message-ID: <38fea484.616132824@news.mindspring.com>
Source record: 61320

On Wed, 19 Apr 2000 21:46:58 -0700, "Al Lorona" <alforo@megsinet.net>
uttered forth the following:

>Does anybody know of a source for a roll of teflon tape? I'm looking for
>just a few mils thick, approximately 1/2 inch wide tape.
>
>Tnx, AL, e-mail alforo@megsinet.net
>
>

I know of a *source*, but not one I'd reccomend to anyone but an
enemy: surplus sales of nebraska

Stefan Bishay - KC7SJC
Seattle, WA
Pacific NW Isuzu Off-Roaders
http://www.mindspring.com/~sbishay

3216. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38FEABF9.926BE9AB@eznec.com>
Source record: 61321

This doesn't meet your requirements, being thinner and narrower, but if you get desperate, you can find Teflon tape at any store that sells plumbing supplies. It's used to seal pipe threads. Does a good job, too.

Roy Lewallen, W7EL

Al Lorona wrote:
>
> Does anybody know of a source for a roll of teflon tape? I'm looking for
> just a few mils thick, approximately 1/2 inch wide tape.
>
> Tnx, AL, e-mail alforo@megsinet.net

3217. Re: TFE wire stripping?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: ritter@io.com
Message-ID: <38feb497.3310356@news.io.com>
Source record: 61322

On Thu, 20 Apr 2000 02:04:19 GMT, in
<DAtL4.2317$GV5.70998@typhoon2.gnilink.net>, in
rec.radio.amateur.homebrew "Ed W." <edek@mail.gcnet.net> wrote:

>Thanks Fellows, but stripping #30 and #28 stranded is sure more difficult
>than say #26, #24 stranded and larger? And the other thing I notice is for
>the stiffness of the insulation after soldering #30 or #28 onto the
>terminal, any lateral movement without a strain relief will shear the
>connection pronto if there is the slightest nick on the wire?

I don't see those problems when I strip #30 stranded TFE. I usually
use the hand stripper with a row of sized cutting holes. I gently
close the stripper to cut the insulation, and then IMMEDIATELY OPEN IT
UP SLIGHTLY, to GENTLY push the cut insulation tube off the wire. One
could probably pull it off by hand just as well. I do not see strands
breaking when I make connections. But I do make sure the solder flows
back into the insulation slightly, thus strengthening that area.

>So far, crushing the insulation, nicking it from behind, then pulling, seems
>to work the best with the small stuff.

That sure seems like a lot of work!

>Larger wire is simply no problem, in
>pulling the teflon off with the Miller stripper as Brad mentioned. I think
>that I will stay away from the heat method for the lack of ventilation?

The one I've seen recently seems to take a while to heat up.

Terry Ritter

3218. Re: Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: pake@lin.foa.se
Message-ID: <pake-0801040427530001@pake.lin.foa.se>
Source record: 61323

This is a radio agc/squelch amplifier from National.
Its in there Linear Data book from 1976.

Perhaps you can search the WEB for LM170 or LM270.
Its the same circuit but diff. temps.

/Per-Ake

In article <38FE10F9.93DF0C64@controltechnology.com>, Paul Robertson
<probertson@controltechnology.com> wrote:

> I need a datasheet for a National Semi LM370.
>
> --
> Paul L. Robertson
> 865-584-0440
> probertson@controltechnology.com

3219. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <38FEF05E.C71EFE0B@bellsouth.net>
Source record: 61324

Al Lorona wrote:

> Does anybody know of a source for a roll of teflon tape? I'm looking for
> just a few mils thick, approximately 1/2 inch wide tape.
>
> Tnx, AL, e-mail alforo@megsinet.net

Plumbing supplies have teflon tape used for thread sealing- in different
widths. However, the thickness is probably only 0.5 mils.

Dale W4OP

3220. Re: Need LM370 Datasheet

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <38fec6a0.236217480@news.online.no>
Source record: 61325

Before making too many suggestions one may ask:
did you obtain a device for a project being matured over 30 years?
or did somebody tell you about the device 30 years ago...?

On Wed, 19 Apr 2000 19:00:26 -0700, "Dana H. Myers K6JQ"
<dana@source.net> wrote:

>
>NatSemi doesn't keep sheets for long-obsolete parts online.
>Best bet is someone that still has a linear data book from
>1980 or so.
>
>
>Bill Kirkland wrote:
>>
>> suggest you try the National Semiconductor web page. (see note below)
>> Most manufactures post their data sheets in PDF format.
>>
>> http://www.national.com/design/
>>
>> Are you sure you got the part number correct?
>> I tried searching NS (and the WEB) for LM370 but had no luck
>>
>> Paul Robertson wrote:
>> >
>> > I need a datasheet for a National Semi LM370.
>> >
>> > --
>> > Paul L. Robertson
>> > 865-584-0440
>> > probertson@controltechnology.com
>
>--
>Dana K6JQ DoD #j
>Dana@Source.Net

3221. Re: Energy sucking is blatent self-promotion!!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: rbmccammon@mmm.com
Message-ID: <38FF0F39.8DFF15D0@mmm.com>
Source record: 61326
Cross-posted to: sci.physics.electromag,sci.electronics.design,rec.radio.amateur.homebrew

Bilge wrote:

> I have a
> statement from "Antenna Theory and Design", stutzman and thiele,
> pg 77 stating the same thing, most of which is obvious, but is
> included for context:

> ...

> A_em = (3/8pi)\lamba^2 = 0.119\lambda^2

> ...

> On page 172, same book, there is a table showing parameters for short
> dipoles which shows every advantage gained by shortening the dipole
> has an increase in width associated with maximizing its efficency.

I have a copy of Stutzman and Thiele, but it must be a
different
edition. I find the formula for A_em on page 59 (chap 1
section 10).

Page 172 is the problem section at the end of chap 3
(arrays).
I cannot find that table. Could you give the chapter,
chapter
title and section (hoping that they at least used the same
organization)?

Opinions expressed herein are my own and may not represent those of my employer.

3222. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38FF2FDD.421FC28D@agilent.com>
Source record: 61327

FWIW, you can get "standard" and "heavy duty" pipe thread sealing tape. I'd look for the "heavy duty" type. The stuff I have is pale orange, vs the white for the standard. You might be able to do a spiral wrap with significant overlap to build up the thickness, if the tape is too thin.

I've also picked up some surplus Teflon tape, ticker and with adhesive coating, at Boeing Surplus...but dunno where you'd find it at a reasonable price new.

Cheers,
Tom

Dale Parfitt wrote:
>
> Al Lorona wrote:
>
> > Does anybody know of a source for a roll of teflon tape? I'm looking for
> > just a few mils thick, approximately 1/2 inch wide tape.
> >
> > Tnx, AL, e-mail alforo@megsinet.net
>
> Plumbing supplies have teflon tape used for thread sealing- in different
> widths. However, the thickness is probably only 0.5 mils.
>
> Dale W4OP

3223. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <38FF30D9.856759EC@agilent.com>
Source record: 61328

Have a look at back issues of "Electronics World + Wireless World"
magazine out of the UK. They've had some wonderful articles on early
radio technology over the years. For example, they described in one
article some high-powered spark transmitters (spark, not Poulsen arc
or alternator) running in excess of 100,000 watts. (Noooo---please do
NOT try to do that with your demo!)

Cheers,
Tom

Fritz Sonnichsen wrote:
>
> I am working with an engineering department here, and we are trying to
> develop, for the lab, a Marconi or spark sending unit for demonstration
> purposes. We have sucessfully built a coherer and transmitted high voltage
> sparks generated signals across a few feet. We would be interested in
> hearing from anyone who has either theoretical information or practical
> experience in building, early Marconi or spark sending units.
>
> Cheers
> Fritz (AA2OP)

3224. Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF718C.296426AA@bellsouth.net>
Source record: 61329

What is your favorite small-signal, low-noise FET
for 3-30MHz?
Not being an expert, and studying the tech sheets,
and looking at applications on the internet and in
the ARRL Handbooks, here is what I've found:

MPF102 This is inexpensive, and would probably work
fine anywhere in an HF preamp or receiver.
Its published tolerances are wide, though.
Its gfs is very low.

J310 This looks super-primo to me. If the tech data
can be believed. The cost is still OK, but there
are fewer sources. Gfs is high. Using these in
the first stage, with grounded gate, seems popular.
Why? (U310 is in a metal can.) There is a graph
of its intermod performance in the tech data I have.
It is drastically better than the similar graphs
in the files for other JFETs I've seen (I can't
remember which.) This suggests that it could tolerate
large signals and would be easier to use in that
first preamp stage.
When I've run models of this in SPICE, its gain has
tended to be low. I think lower gain with greater
dynamic range would be easier to work with.

40673 This is an extremely good dual gate mosfet that
NTE222 would be fun to play with. It cost ten times
as much. If one needed this function, couldn't it
be done almost as well with totem-poled JFETs?

2N4416 I see this is very popular. I don't know why.

2N5484 These aren't mentioned as often. I don't know why.
2N5485 The specs look very good to me.
2N5486
2N5670
2N5668
2N5669

Studying this issue is difficult, because I'm not sure which
specs to favor.
Any of these would work very well. I like the J310 best.
Charles Kitchin, N1TEV, seems to know what he's doing. In his
circuits I've seen, he has used 2N4416, J310, MPF102, and the
BJT 2N2222, all in similar applications (preamps and simple

receivers). These four devices are quite different.

3225. Toroid core mix- what I found.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF775D.A5D70A9F@bellsouth.net>
Source record: 61330

I have the Amidon tech booklet.
This is interesting, and there are many
variables to consider.

10 MHz:
(This is the geometric mean of the HF band.)
Fixing the frequency at 10 MHz, the inductance
between .2uH and 1.8uH, wire size as big as
will fit on the core, and studying the Q-curves
provided in the booklet, extrapolating a little
where necessary, I found:
The bigger the core, the better, limit unknown.
For any size core, -6 was better than -2.

5 MHz:
For this frequency, I looked at inductances between
.4uH and 3.6uH.
Results:
For core sizes <= T-50, -2 was slightly better.
For core sizes >= T-68, -6 was still better.

I am interested in receiving, around 4.7Mhz to 22Mhz.
Unless I learn something else, I'll probably use
> T-68-6 wherever powdered iron is called for.
(Possible exception: when filtering out the BC band.)
I like handling larger parts and heavier wire anyway.

3226. Re: Singer/Panoramic Equipment

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "George R. Gonzalez" <grg@umn.edu>
Message-ID: <8dntn8fq1@news1.tc.umn.edu>
Source record: 61331
Cross-posted to:
aus.electronics,aus.radio.amateur.misc,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,sci.electronics.equipment

You might try www.manualsplus.com:

They seem to have a lot of old Panoramic manuals:

You Searched For: panoramic

24 Matches Found (displaying 1 to 24)

Manufacturer Model Description PartNumber
PANORAMIC AP-1 OP-SV
PANORAMIC C/C-1 INSTRU
PANORAMIC C-2 INSTRU
PANORAMIC LF-2 INSTRU
PANORAMIC LF-2B/LF-2BM INSTRU
PANORAMIC LP-1A INSTRU
PANORAMIC LP-1A OP-SV
PANORAMIC PDA-1 INSTRU
PANORAMIC PTT-1 OP-SV
PANORAMIC RC-3B OP-SV
PANORAMIC SA-3 OP-SV
PANORAMIC SB-12 OP
PANORAMIC SB-15A OP-SV
PANORAMIC SB-15A INSTRU
PANORAMIC SB-7BZ OP-SV
PANORAMIC SPA-10 OP-SV
PANORAMIC SPA-3/SPA-3/25 OP-SV
PANORAMIC SPA-3A/SPA-3/25A OP-SV 110-5005
PANORAMIC SSB-3B OP-SV Series 258
PANORAMIC TA-2/RTA-5 OP-SV
PANORAMIC TMC-307 OP-SV
PANORAMIC TMC-307A OP
PANORAMIC TMI-1B/TMP-1B/TMC-1A OP-SV
PANORAMIC TMI-4/120 TMI-4/200 OP-SV

Cortland Richmond wrote in message <38FDF73C.F345E8EF@usa.alcatel.com>...
>FWIW, the EMI instrument line of Singer was bought by Eaton, then Ailtech,
>then Carnel. Which business (Carnel) is for presently for auction on
E-Bay.
>
>Te moritiri salutamus!
>
>Cortland
>(ka5s@saber.net)
>

>John Mackesy wrote:
>
>> Jan-Martin,
>>
>> Panoramic/Singer have been out of business for quite a few years now. I'm
>> told this was due to their being swallowed up in a series of corporate
>> merger/acquisitions. I'd really like to get the full story one of these
>> days.I got a manual for my MF-5/CA5-1 (SSB 50 system) from Manual
Merchant
>> (Thanks, Linda Perkins!).
>>
>> I've seen manuals for the HF systems avail from the usual vendors.
>>
>> 73,
>>
>> John Mackesy
>>
>> > seems to be completely impossible to obtain docs for Singer equipment.
>> > A friend working for the navy told me they tried for years to get
>> > maintenance docs for UHF and SHF signal generators, but no result, not
>> > even negative reply. Perhaps only the army is still stupid enough to
>> > buy such equipment on several occasions?
>> >
>> > 73
>> > jan-martin
>> > LA8AK
>

3227. Braiding small wires.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF7C4A.4FC1A2F@bellsouth.net>
Source record: 61332

This is about winding typical inductors for HF.

Reducing HF resistance by choosing very large
wire diameters, after a point, leaves a lot of
wasted copper and space, inside the wire.
At some point, using many smaller wires in parallel
becomes much better.
The governing equations are somewhere on the internet
and elsewhere, so one could strike a balance.

One thing I haven't seen, is how to braid Litz wire.
Can someone point me to this?

I think laying the wires in parallel, or twisting,
or ordinary braiding, would work OK.

I have some old texts I can't get to right now, that
describe this, and basket-winding, and pye-winding,
and all of that other neat stuff. I haven't decided
whether or not to wind my RF chokes too. I can't study
everything at once.

3228. FS Project Jump start chassis

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: tonys2@aol.com
Message-ID: <20000420175700.26592.00001428@ng-cf1.aol.com>
Source record: 61333

1 3/4 in attractive rack mount aluminum. prewired with
std ac conn/filter/fuse and dc supply +5 and + - 12v.
Ten inch deep. BNC's across back. $45 ea. Ten for ??.
TonyS2@aol.com

3229. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38FF7C0E.D2ACDE3D@eznec.com>
Source record: 61334

I prefer the 2N4416 over the MPF102. The problem with the MPF102 is its extremely wide specification range. So you can't predict within any reasonable bound what the Idss or zero-bias Gm will be, for example. The 2N4416 has essentially the same specs, just with more reasonable limits. The MPF102 would be ok in some applications, and ok in others if you're willing to select one, have a bucket of them to select from, and don't want to make many copies of the circuit or have anybody else duplicate it. But I find it hard to apply to a lot of applications because of the wide specs.

Roy Lewallen, W7EL

"Ralph E. Carter" wrote:
>
> What is your favorite small-signal, low-noise FET
> for 3-30MHz?
>. . .

3230. GGate versus GSource

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF9021.192527B7@bellsouth.net>
Source record: 61335

Circuit #1:
Antenna goes through 100pF and then sees two things-
a 200ohm resistor to ground, and the source of the
grounded gate Q1, a 2N4416.
This source offers a low impedence.
A 75 ohm antenna input is specified.
I understand this.

Circuit #2:
This circuit is by the same author.
Antenna goes through 50pF and then sees two things-
a 200Kohm resistor to ground, and the gate of the
grounded source Q1, a 2N4416.
This gate presents a high impedence.
The antenna impedence is not specified.
This high impedence would make it less necessary to tune
out the reactance of an untuned antenna, and this would
make it easier to use with random antennas. Yes?
(The circuit was intended "for beginners".)
But otherwise, I don't understand how this can be
close to right. That input should be somewhere between
50 and 600 ohms or so. Right?

(These interesting parts of these circuits were elsewhere,
thus, these inputs were not necessarily intended to be
optimized. But for top performance, shouldn't there be
only reactances, where those resistances are?)

3231. Re: Braiding small wires.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF9394.592010C7@bellsouth.net>
Source record: 61336

Hi.
I've appreciated many of your postings, and I've saved some of them.
I think I saved your last big posting on "skin effect".
I started studying Spanish.
Then I started to listen to Spanish on shortwave.
Then I started wanting my radio to work better.
So now I'm playing with circuits again, instead of studying Spanish!
Bye.

Roy Lewallen wrote:
>
> Putting the wires in parallel doesn't help. The current just flows on
> the outside of the bundle. Weaving them to make Litz wire helps only up
> to 1 MHz or so, where the skin depth is comparable to the wire diameter.
> The only way to save copper at higher frequencies is to use tubing, and
> there's no way to save size while maintaining the same RF resistance.
> It's the outside surface area that counts. Sorry.
>
> If you want to wind your own RF chokes, you'll either have to do some
> more studying or else get lucky. By the time you get enough inductance
> for the desired impedance, you might have enough distributed capacitance
> to be well beyond self-resonance. If that happens, you can have less
> impedance than you expect. Using a high-permeability ferrite core can
> solve this problem because it'll be essentially resistive at RF. But
> then you have to worry about core saturation by the DC flux. This can be
> handled with careful design and/or an air gap, but you'll have to learn
> a bit about all this to do a consistently good job. Powdered iron cores
> can also be saturated, but it occurs at a much higher flux density than
> ferrite. But with a powdered iron core you can run into the
> self-resonance problem.
>
> Roy Lewallen, W7EL
>
> "Ralph E. Carter" wrote:
> >
> > This is about winding typical inductors for HF.
> >
> > Reducing HF resistance by choosing very large
> > wire diameters, after a point, leaves a lot of
> > wasted copper and space, inside the wire.
> > At some point, using many smaller wires in parallel
> > becomes much better.
> > The governing equations are somewhere on the internet
> > and elsewhere, so one could strike a balance.

> >
> > One thing I haven't seen, is how to braid Litz wire.
> > Can someone point me to this?
> >
> > I think laying the wires in parallel, or twisting,
> > or ordinary braiding, would work OK.
> >
> > I have some old texts I can't get to right now, that
> > describe this, and basket-winding, and pye-winding,
> > and all of that other neat stuff. I haven't decided
> > whether or not to wind my RF chokes too. I can't study
> > everything at once.

3232. Re: Braiding small wires.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FF9719.78A733D6@bellsouth.net>
Source record: 61337

Roy Lewallen wrote:
>
> Putting the wires in parallel doesn't help. The current just flows on
> the outside of the bundle. Weaving them to make Litz wire helps only up
> to 1 MHz or so, where the skin depth is comparable to the wire diameter.
> The only way to save copper at higher frequencies is to use tubing, and
> there's no way to save size while maintaining the same RF resistance.
> It's the outside surface area that counts. Sorry.
>
> If you want to wind your own RF chokes, you'll either have to do some
> more studying or else get lucky. By the time you get enough inductance
> for the desired impedance, you might have enough distributed capacitance
> to be well beyond self-resonance. If that happens, you can have less
> impedance than you expect. Using a high-permeability ferrite core can
> solve this problem because it'll be essentially resistive at RF. But
> then you have to worry about core saturation by the DC flux. This can be
> handled with careful design and/or an air gap, but you'll have to learn
> a bit about all this to do a consistently good job. Powdered iron cores
> can also be saturated, but it occurs at a much higher flux density than
> ferrite. But with a powdered iron core you can run into the
> self-resonance problem.

Yes, I agonized over these issues at audio frequency, in the past, and I
can't go through that again! I think I'll be an expert on something
else, and just buy these! Thanks.

>
> Roy Lewallen, W7EL
>
> "Ralph E. Carter" wrote:
> >
> > This is about winding typical inductors for HF.
> >
> > Reducing HF resistance by choosing very large
> > wire diameters, after a point, leaves a lot of
> > wasted copper and space, inside the wire.
> > At some point, using many smaller wires in parallel
> > becomes much better.
> > The governing equations are somewhere on the internet
> > and elsewhere, so one could strike a balance.
> >
> > One thing I haven't seen, is how to braid Litz wire.
> > Can someone point me to this?
> >
> > I think laying the wires in parallel, or twisting,

> > or ordinary braiding, would work OK.
> >
> > I have some old texts I can't get to right now, that
> > describe this, and basket-winding, and pye-winding,
> > and all of that other neat stuff. I haven't decided
> > whether or not to wind my RF chokes too. I can't study
> > everything at once.

3233. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <38FFBAF3.8F052D85@bright.net>
Source record: 61338

The 40673 is no longer made and nearly impossible to find. Since I also use VHF the J310 is my choice and works well in whatever I've used it for. In a common gate configuration it's gain is about 10 db and very stable. In common source gain is of course higher but still works predictivly well. Works for me but opinions may vary.
73 Paul N8ULS

3234. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <38FFBD10.A7F98372@eznec.com>
Source record: 61339

"Ralph E. Carter" wrote:
>
> One example is in the ARRL Handbook, 1998,
> "A Regenerative Receiver for Beginners", by
> Charles Kitchin, N1TEV.
> Its first two stages are a cascode: Q1 is a
> common source voltage amp, Q2 is a grounded
> gate buffer. The drain of Q1 is connected
> directly to the source of Q2- they form a
> "totem pole".
> It looks like these are doing exactly what
> a dual-gate MOSFET could do here.
>
> The MOSFET would be interesting and neat,
> (at ten times the cost). But am I right,
> that the JFETs are functionally equivalent
> here?

Yep.

Roy Lewallen, W7EL

3235. Re: Braiding small wires.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: Lutan <nosnot@nosnot.com>
Message-ID: <38FFB0FE.207E@nosnot.com>
Source record: 61340

Ralph E. Carter wrote:
>
> One thing I haven't seen, is how to braid Litz wire.
> Can someone point me to this?

Well, the Litz I've seen in loading coils and variometers in the transmitters I used---wires up to 1/4" diameter---were not braided or woven. They more closely conformed to ordinary rope manufacturer; in other words, a number of fibers are twisted together to form yarns, which are then twisted together in the opposite direction to the fibers to form strands. The strands are twisted in the opposite direction to the yarns to form the completed rope. Though in the case of Litz wire yarns were twisted to form strands whereupon they formed the actual wire---the basic wire (#40 or so) are the yarns so to speak and formed strands of 40 wires each perhaps, thence a number of strands twisted into the final Litz wire whereupon it is finished with two spiral wraps (in opposite directions) of what seems like cotton fibers.

I reckon if a fellow wishes to make their own Litz wire it could be a nice home project---certaintly not outside the capabilities of the advanced home shop machinist.

3236. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <8dog5nniu1@vax.area.com>
Source record: 61341

In article <38FFBAF3.8F052D85@bright.net>,
Paul Martin <pmartin@bright.net> wrote:
>The 40673 is no longer made and nearly impossible to find. Since I also
>use VHF the J310 is my choice and works well in whatever I've used it
>for. In a common gate configuration it's gain is about 10 db and very
>stable. In common source gain is of course higher but still works
>predictivly well. Works for me but opinions may vary.

I really like the Philips BF904. It has a special biasing circuit
that makes it much easier to get consistent bias current. It is a
dual gate MOSFET with 30 mS transconductance and less than .1 pF
feedback capacitance. They are intended for UHF TV tuners. NF
is about .5 dB at 100 MHz.

Rick Karlquist N6RK

3237. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FFC881.5A2A3947@bellsouth.net>
Source record: 61342

Richard Karlquist wrote:
>
> In article <38FFBAF3.8F052D85@bright.net>,
> Paul Martin <pmartin@bright.net> wrote:
> >The 40673 is no longer made and nearly impossible to find. Since I also
> >use VHF the J310 is my choice and works well in whatever I've used it
> >for. In a common gate configuration it's gain is about 10 db and very
> >stable. In common source gain is of course higher but still works
> >predictivly well. Works for me but opinions may vary.
>
> I really like the Philips BF904. It has a special biasing circuit
> that makes it much easier to get consistent bias current. It is a
> dual gate MOSFET with 30 mS transconductance and less than .1 pF
> feedback capacitance. They are intended for UHF TV tuners. NF
> is about .5 dB at 100 MHz.
>
> Rick Karlquist N6RK

Very interesting.
The Philips guide says "VHF/UHF".
These are in the tiny surface-mount packages.
They are about $.21 each, in very large quantities.

3238. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-20 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <38FFC92F.F413710A@bellsouth.net>
Source record: 61343

Paul Martin wrote:
>
> The 40673 is no longer made and nearly impossible to find.

That's too bad. The supposed equivalent NTE222 is also discontinued.

> Since I also
> use VHF the J310 is my choice and works well in whatever I've used it
> for. In a common gate configuration it's gain is about 10 db and very
> stable.

Thanks. This is what I suspected.

> In common source gain is of course higher but still works
> predictivly well. Works for me but opinions may vary.
> 73 Paul N8ULS

3239. Wanted: Atlas Mobile Mount

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: jbr101@my-deja.com
Message-ID: <8dprhhelf1@nnrp1.deja.com>
Source record: 61245
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I'm looking for a mobile mount for the Atlas 180/210/215 series of
transceivers.

If you have one kicking around you want to sell please contact me.

73,
Jeff
N6MNI

Sent via Deja.com http://www.deja.com/
Before you buy.

3240. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dick <Dick@langwang.demon.co.uk>
Message-ID: <vFJ+QGAZBEA5Ew5D@langwang.demon.co.uk>
Source record: 61246

In article <38FF30D9.856759EC@agilent.com>, Tom Bruhns
<tom_bruhns@agilent.com> writes
>Have a look at back issues of "Electronics World + Wireless World"
>magazine out of the UK. They've had some wonderful articles on early
>radio technology over the years. For example, they described in one
>article some high-powered spark transmitters (spark, not Poulsen arc
>or alternator) running in excess of 100,000 watts. (Noooo---please do
>NOT try to do that with your demo!)
>
>Cheers,
>Tom
>
>Fritz Sonnichsen wrote:
>>
>> I am working with an engineering department here, and we are trying to
>> develop, for the lab, a Marconi or spark sending unit for demonstration
>> purposes. We have sucessfully built a coherer and transmitted high voltage
>> sparks generated signals across a few feet. We would be interested in
>> hearing from anyone who has either theoretical information or practical
>> experience in building, early Marconi or spark sending units.
There has been an article/report in EE+WW recently (past 2 yrs)
about trials to replicate spark Tx using an auto ignition coil. I don't remember
the exact date but I do remember it was tested in an abandoned railroad
tunnel. Failing that The Admiralty Handbooks of Wireless Telegraphy are a
mine of information about spark Tx & associated Rx (my copies 1925 &
1938). Did see copies of both Vol 1 & 2 while browsing a Bellingham WA
2nd hand bookshop & wondered how they got there. The earlier edition
(1925) is probably better as the 1938 is already describing the spark Tx as
obsolete, if you can only find a later 2 vol. set you'll need Vol 2.
Another source of info see High Power Wireless Equipment (Articles
from Practical Electricity 1910-11) reprinted by Lindsay Publications Inc.,
Bradley IL 60915 (ISBN 0-917914-95-3), this'll even tell you how to enamel
the Cu wire you're going to need to make that 2kW spark gap Txfmr.
For info on coherers & detectors Early Radio Wave Detectors by VJ
Phillips is excellent, (ISBN 0-906048-24-9) as Vol 2 of the History of
Technology Series. Publ. Peter Peregrinus Ltd (in association with The
Science Museum, London). Connecting a frogs leg to a pointer moving
across the smoked surface of a moving drum and wiring your Rxd signal to
the frogs sciatic nerve (operating time limited by onset of rigor mortis) is nearly
as original as signal detection by taste - 2 small silver contacts placed in the
mouth, 'a slight difference in taste sensation produced between 500Hz &
250Hz spark transmissions being reported (as well as a tendency to produce
a sensation of toothache in the front teeth !!!!)' but it's probably as well that
they didn't catch on.

--
Dick
GM0MNL

3241. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <xpXL4.6532$sB3.4632@news.indigo.ie>
Source record: 61247

>What is your favorite small-signal, low-noise FET
>for 3-30MHz?
>Not being an expert, and studying the tech sheets,
>and looking at applications on the internet and in
>the ARRL Handbooks, here is what I've found:
>

Jfet
J113, because I got few hundred of them for free.

DG Mosfet.
BF961 or BF981.

73, Ed. EI9GQ

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3242. Discontinued IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: "R. Alfred Whiting" <gdwhiting@erols.com>
Message-ID: <8dphbo$9eb$4@bob.news.rcn.net>
Source record: 61248

Recently someone posted a notice on a newsgroup about an IC
being discontinued. I can't find it and I can't remember whether
it was a LM 3900 or not. If you posted this or remember this one
please advise me what IC it is.

Thanks

Al K3BRS

3243. FA: Multi-Elmac AF-67 Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005EC2.6D1EC455@getnet.com>
Source record: 61249
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=310675808

3244. FA: Heathkit VF-1 VFO

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005EE5.DAA7262B@getnet.com>
Source record: 61250
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=310642959

3245. FA: National NC-98 and Speaker

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005E92.F47F9553@getnet.com>
Source record: 61251
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

A really clean NC-98 and matching speaker

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=309501097

3246. FA:Collins Radio 32S-1 Escutcheon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005F52.C640CEB9@getnet.com>
Source record: 61252
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=309506010

3247. FA:Multi-Elmac A54H Mobile Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005F28.29809560@getnet.com>
Source record: 61253
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=309503132

3248. FA: E.F. Johnson Ceramic Tube Sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dave Hollander <davidh@getnet.com>
Message-ID: <39005F93.778110F9@getnet.com>
Source record: 61254
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=309508463

3249. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <4d%L4.14361$L7.2862886@news-west.usenetserver.com>
Source record: 61255

Have a look at

http://www.physics.otago.ac.nz/~ursi/belrose/spark.html

73, Carl WS7L

"Fritz Sonnichsen" <sonnichs@berkshire.net> wrote in message
news:01bf841a$ceecba20$1772ba8c@ivy.bcbsrony.co...
> I am working with an engineering department here, and we are trying to
> develop, for the lab, a Marconi or spark sending unit for demonstration
> purposes. We have sucessfully built a coherer and transmitted high voltage
> sparks generated signals across a few feet. We would be interested in
> hearing from anyone who has either theoretical information or practical
> experience in building, early Marconi or spark sending units.
>
> Cheers
> Fritz (AA2OP)
>

3250. Anyone know a Boston, MA area source for aluminum tubing?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <3900954C.9650A037@software.com>
Source record: 61256
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antennas

This is a homebrew antenna question:

I know Texas Towers carries aluminum tubing, but I like to buy stuff like this locally if possible.

Anyone know any place near Boston (within say 120 miles) that would sell it to me in smallish quantities?

thanks and best regards,
nick caruso kb1dej

3251. Kit or Homebrew 2m transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Jay Moyer <jmoyer43@earthlink.net>
Message-ID: <39008865.E00F04B0@earthlink.net>
Source record: 61257

I am thinking about starting amature radio and have read quite a bit about the subject. I enjoy working on electronic project (completed several over the years) so i would like to build all of my own equipment . I my reading i have come across some HF equipment that is rated excellent such as the norcal 40 and sierra and several projects out of the arrl handbook but have only found one kit (ramsey) for a 2 m transceiver and no plans. Does anyone have the ramsey kit and how do you rate it. Any other plans? I am interest in the higher end radios for clarity and power.

Thank you
Jay Moyer
jmoyer43@earthlink.net

3252. QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <3900A27A.F1430A42@midwestmicro-tek.com>
Source record: 61258

I found a great, simple QRP schematic on a web site. It's supposed to output about 5 watts and used a 7400 as the driver into the final transistor. Unfortunately the notes only say that "any rf transistor will do". I'm pretty new to hamming and I don't know what would be a good choice. The author of the web site has no e-mail link so I can't ask him. I get a lot of my stuff from (silver mica caps and tubes) hppt://alltronics.com , they have a lot of transitors and I'm sure at least one of them will do. Any suggestions?

Thanks,

Rick KC0GIX

3253. Re: Kit or Homebrew 2m transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Sandy <n9pgo@mediaone.net>
Message-ID: <3900B055.CE8CB21D@mediaone.net>
Source record: 61259

U can try this site:
http://www.tentec.com/Amateur.htm

73 es cul...Sandy

Jay Moyer wrote:

> I am thinking about starting amature radio and have read quite a bit
> about the subject. I enjoy working on electronic project (completed
> several over the years) so i would like to build all of my own equipment
> . I my reading i have come across some HF equipment that is rated
> excellent such as the norcal 40 and sierra and several projects out of
> the arrl handbook but have only found one kit (ramsey) for a 2 m
> transceiver and no plans. Does anyone have the ramsey kit and how do
> you rate it. Any other plans? I am interest in the higher end radios
> for clarity and power.
>
> Thank you
> Jay Moyer
> jmoyer43@earthlink.net

3254. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <39008601.350764036@news.online.no>
Source record: 61260

On Fri, 21 Apr 2000 12:00:23 GMT, Xnospam@oceanfree.net (Eamon
Skelton) wrote:

>>What is your favorite small-signal, low-noise FET
>>for 3-30MHz?
>>Not being an expert, and studying the tech sheets,
>>and looking at applications on the internet and in
>>the ARRL Handbooks, here is what I've found:
>>
>
>Jfet
>J113, because I got few hundred of them for free.
>
>DG Mosfet.
>BF961 or BF981.
>
>73, Ed. EI9GQ
>
>
JFET: MPF102 and BF245 because they are inexpensive,

Mosfet: BF905 because I got 100 for free, also got some douzen 40673,
but they are not so easy to mount

73 JM LA8AK

3255. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Nick Caruso <nick.caruso@software.com>
Message-ID: <3900BE6D.25E3F8BB@software.com>
Source record: 61261

Roy Lewallen wrote:

> "Ralph E. Carter" wrote:
> >
> > One example is in the ARRL Handbook, 1998,
> > "A Regenerative Receiver for Beginners", by
> > Charles Kitchin, N1TEV.
> > Its first two stages are a cascode: Q1 is a
> > common source voltage amp, Q2 is a grounded
> > gate buffer. The drain of Q1 is connected
> > directly to the source of Q2- they form a
> > "totem pole".
> > It looks like these are doing exactly what
> > a dual-gate MOSFET could do here.
> >
> > The MOSFET would be interesting and neat,
> > (at ten times the cost). But am I right,
> > that the JFETs are functionally equivalent
> > here?
>
> Yep.
>
> Roy Lewallen, W7EL

All this talk about jfets has reminded me of a question that has troubled my mind from time to time.

Has anyone ever mounted the metal-case U310 by drilling a hole in a pc board and soldering the can in place? I'm guessing the jfet inside might not survive the operation, but if it did this would be a nice mechanically sturdy way of mounting the jobbies. Or maybe silver-bearing epoxy?

best regards,
ncc kb1dej

PS anyone know the origin of the term "cascode"?

3256. Ten Tec PM-1 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: john roccaro <jroccaro@chesco.com>
Message-ID: <390172DD.CA98807@chesco.com>
Source record: 61262

Can anyone help me find tech info, schematic, etc for a Ten Tec Power
Mite 1?
Thanks, John KN3I

3257. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <QY3M4.19786$004.55688@news02>
Source record: 61263

> Has anyone ever mounted the metal-case U310 by drilling a hole in a
pc board and
> soldering the can in place?

yes ...

> I'm guessing the jfet inside might not survive the
> operation,

generaly they don't unless you are very fast or just solder the tab

> but if it did this would be a nice mechanically sturdy way of
> mounting the jobbies.

hot melt glue also works

> Or maybe silver-bearing epoxy?

The stuff absorbs water from the air. Then it tends to degrade. H10 is
especialy prone to this.

Bob

3258. Re: Ten Tec PM-1 Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: James Horn <jimhorn@svn.net>
Message-ID: <3900d116@news1.svn.net>
Source record: 61264

QST ran an article in the '70s on replacing the front end mixer circuit with a different one. As I recall, schematics for portions of the unit were in the article. Check the ARRL Web site which includes indexes of all their QST issues.

Having owned two PowerMites, I wish you the best with them - they were fun little rigs!

Jim Horn, WB9SYN/6

3259. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8dqldh$j2h1@icet.net.nih.gov>
Source record: 61265

HELIO SAKAYA (enatec@worldnet.att.net) wrote:
: Anyone out there interested in homebrewing with vintage transistors?
: Remember superegenerative 10M receiver circuit using surface barrier
: transistors?
: I'm interested in swaping parts and schematics.
: Helio

--

There is a CK722 web site;
http://www.geocities.com/ck722transistor/history/rca.htm
I also am interested in super regen circuits. Drop
me an email at arm@gnode.org

-- Andy

3260. Re: Discontinued IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8dqljj$j2h2@icet.net.nih.gov>
Source record: 61266

R. Alfred Whiting (gdwhiting@erols.com) wrote:
: Recently someone posted a notice on a newsgroup about an IC
: being discontinued. I can't find it and I can't remember whether
: it was a LM 3900 or not. If you posted this or remember this one
: please advise me what IC it is.
:
: Thanks
:
: Al K3BRS
:
:
:

I think it was the 3900. If that is the current mode op amp,
the answer is "yes".

3261. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8g1pg4.7sk.X@animas.frontier.net>
Source record: 61267

On 21 Apr 2000 22:40:49 GMT, Andrew R Mitz scribbled:

>There is a CK722 web site;
>http://www.geocities.com/ck722transistor/history/rca.htm
>I also am interested in super regen circuits. Drop
>me an email at arm@gnode.org
>-- Andy

re: http://www.geocities.com/ck722transistor/
I was looking at this site the other day following a previous
post of yours.
How do you expect the search engine to find and catalog this web
site with each and every page totally graphical (that is: textless)
and with no informative meta-tags?

It is a Very Good presentation, tho'.

Jonesy W3DHJ
Who built a CK722(3) + CK768 Superhet AM rcvr somewhere around 1957-58

--
Marvin L Jones | jonz | W3DHJ | OS/2
Gunnison, Colorado | @ | Jonesy | linux __
7,703' -- 2,345m | frontier.net | DM68mn SK

3262. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3900EB28.1A9AA16C@agilent.com>
Source record: 61268

Dick wrote:

> There has been an article/report in EE+WW recently (past 2 yrs)
> about trials to replicate spark Tx using an auto ignition coil. I don't remember
> the exact date but I do remember it was tested in an abandoned railroad
> tunnel. Failing that The Admiralty Handbooks of Wireless Telegraphy are a
> mine of information about spark Tx & associated Rx (my copies 1925 &
> 1938). Did see copies of both Vol 1 & 2 while browsing a Bellingham WA
> 2nd hand bookshop & wondered how they got there. The earlier edition
> (1925) is probably better as the 1938 is already describing the spark Tx as
> obsolete, if you can only find a later 2 vol. set you'll need Vol 2.

Dick's posting reminds me...long ago I had a book titled "The Boy Electrician." It had a wealth of interesting projects in it of the sort that boys--and others--tinkered with in the early 1900's, but somewhere along the way, I lost it. Darn. However, in searching some used-book web sites, I discovered that it has apparently been reprinted, and you can probably find a copy at a reasonable price. It would be a nice addition to a "spark museum" I think, even if you don't manage an original edition.

Cheers,
Tom

3263. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: "Geoffrey G. Rochat" <geoff@pkworks.com>
Message-ID: <8dqqq5$s8$1@news.kersur.net>
Source record: 61269

You might want to consider looking into a rather eclectic organization
known as The New England Wireless and Steam Museum,
users.ids.net/~newsm/

>Fritz Sonnichsen wrote:
>>
>> I am working with an engineering department here, and we are trying
to
>> develop, for the lab, a Marconi or spark sending unit for
demonstration
>> purposes. We have sucessfully built a coherer and transmitted high
voltage
>> sparks generated signals across a few feet. We would be interested in
>> hearing from anyone who has either theoretical information or
practical
>> experience in building, early Marconi or spark sending units.
>>
>> Cheers
>> Fritz (AA2OP)

3264. Looking for Yaesu Programming Cable Or Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Scott Bailey <sbailey@upgradebase.com>
Message-ID: <XB6M4.5966$pJ2.808144@news.pacbell.net>
Source record: 61270
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

I'm looking for the schematic or a cable to buy for for programming older Yaesu radios. I have a FTH-7008, although I believe the same part works for the following models:
FTH-2070
FTH-2008
FTH-7008
FTH-7009
FTH-2009
FTH-2011
FTH-7011
The cable I'm looking for plugs into the serial port and attaches to the microphone plug of the radio.
This is not the same cable as used for the newer VX series. That has a 4 conductor plug.

Any help would be appreciated.

Scott
sbailey@upgradebase.com

3265. Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Grace Cunningham <johngrac@surfsouth.com>
Message-ID: <39010BDB.39D2@surfsouth.com>
Source record: 61271

Has anyone come up with a plan to use a car alternater to charge deep cycle batteries using "wind power". I like QRP, one windy day will keep me going a long time! KE4QOP John

3266. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Corky <corky@myremarq.com>
Message-ID: <16f88cbc.f41fd080@usw-ex0103-023.remarq.com>
Source record: 61272

I saw a spark xmitter on sale at e-bay a while back,probably not
there anymore but I have seen spark related equipment there on
quite a few occasions.
Also, look on ebay for early twenties and thirties books about
electricity or radio. I have a book titled "Principles of Radio
Communication" by J.H.Morecroft that contains a wealth of info
about spark gap telegraphy. copyright 1921. No isbn number
though.I purchased this book for 4.00 locally but have seen it
on ebay for less up to about 10.00

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

3267. Re: Looking for Yaesu Programming Cable Or Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Dan <dand@truvalue.com>
Message-ID: <8dr7bk$54j$1@news.xmission.com>
Source record: 61273
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap

Hey Scott,

The VPL-1 is the cable to program the radios you listed. The VPL-1D is
the cable and associated software to program the radios you listed. After
weeks of searching, I finally decided to just bite the bullet and buy the
programming kit. Works great!

73 Dan
N7SLC

Scott Bailey <sbailey@upgradebase.com> wrote in message
news:XB6M4.5966$pJ2.808144@news.pacbell.net...
> I'm looking for the schematic or a cable to buy for for programming older
> Yaesu radios. I have a FTH-7008, although I believe the same part works
for
> the following models:
> FTH-2070
> FTH-2008
> FTH-7008
> FTH-7009
> FTH-2009
> FTH-2011
> FTH-7011
> The cable I'm looking for plugs into the serial port and attaches to the
> microphone plug of the radio.
> This is not the same cable as used for the newer VX series. That has a 4
> conductor plug.
>
> Any help would be appreciated.
>
> Scott
> sbailey@upgradebase.com
>
>
>
>

3268. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <4W9M4.527$Hc7.13054@news.corecomm.net>
Source record: 61274

Thanks to all who responded to my query re teflon tape. I was able to find the yellow tape at a local building contractor's supply store. It appears to be about 5 mils thick, 1/2 inch wide and is more robust than the very thin white tape you find almost everywhere.

73. AL

3269. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <390132CB.E431CD1A@eznec.com>
Source record: 61275

Do you know what its intended use is?

Roy Lewallen, W7EL

Al Lorona wrote:
>
> Thanks to all who responded to my query re teflon tape. I was able to find
> the yellow tape at a local building contractor's supply store. It appears to
> be about 5 mils thick, 1/2 inch wide and is more robust than the very thin
> white tape you find almost everywhere.
>
> 73. AL

3270. WTB HV XFMR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <3900D92A.72794ABC@pa.net>
Source record: 61276

Hi,
I am looking for a Tokyo Hy-Power transformer. Part number
THP-595HV-UL. Or a 115/240V -> 2400V@1A transformer with
total dimensions; H5.5", W6", D7.5". I know I can get one
from Dahl but thought there might be one in someone's junque
box.
Also looking for a complete 2x3-500z Tokyo Hy-Power amp for
parts. Tubes not necessary.
Art k3xf

3271. Auction: TCS-14 Transmitter NOS MINT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-21 00:00:00 UTC
From: jbr101@my-deja.com
Message-ID: <8dpqrp$e0t$1@nnrp1.deja.com>
Source record: 61344
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a new-old-stock TCS-14 transmitter for auction on eBay.

The URL is

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=314106127

and the blurb is

This is an unused and unmodified new-old-stock mint-condition example of the venerable TCS-14 AM/CW transmitter. Found as-new in-the-box, never put into military service, with no holes gouged out for coax connectors, no manky power cables grafted into the case, no mouse nests in the wiring, or any other defect usually found with these rigs. Covers 1.5-12 mHz, AM or CW, and with the appropriate power supply (not included), I believe it puts out around 35 watts AM, 50 watts CW. The inside gleams like the day it was produced, the panel and chassis have no corrosion or discoloration. Includes cabinet and shock mount feet as shown. Some of the packing material is stuck on the large front handle, but that will be easy to remove. I may clean that and repost a picture so I can see this fine old rig in all it's glory before it goes out the door. Unless you have a time machine, you're never going to find a cleaner example of a TCS transmitter -- don't pass it up !

Closes 4/30/00

Thank you.

Sent via Deja.com http://www.deja.com/
Before you buy.

3272. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Paul <pmartin@bright.net>
Message-ID: <3902087B.3E0CD4D2@bright.net>
Source record: 61195

Pushing any of those three to 5W will smoke them.

Steve Ratzlaff wrote:

> Hi Rick,
> I believe Radio Shack is currently carrying the 2N3553, which would make
> a good HF QRP output transistor, with a heat sink on it. Another good
> one is the 2N5109. Any one you choose must have a heat sink if you want
> to try for 5 watts output. A 2N3866 would also probably work, but it is
> not so stable as the first two. I don't know what Alltronics is offering
> for transistors.
> Steve AA7U
>
> Rick Haub wrote:
> >
> > I found a great, simple QRP schematic on a web site. It's supposed to
> > output about 5 watts and used a 7400 as the driver into the final
> > transistor. Unfortunately the notes only say that "any rf transistor
> > will do". I'm pretty new to hamming and I don't know what would be a
> > good choice. The author of the web site has no e-mail link so I can't
> > ask him. I get a lot of my stuff from (silver mica caps and tubes)
> > hppt://alltronics.com , they have a lot of transitors and I'm sure at
> > least one of them will do. Any suggestions?
> >
> > Thanks,
> >
> > Rick KC0GIX

3273. Re: ISO - PE/IE QRP Rig Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Fuzzy or Shirley Duenkel <fuzzy@duenkel.com>
Message-ID: <FHoM4.2734$5b3.772711@homer.alpha.net>
Source record: 61196

The issue was August 1965, written by Hartland B. Smith, who wrote many articles about QRP rigs. I have the issue. Do you want me to photocopy it and send it to you?

Fuzzy

3274. WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Fuzzy or Shirley Duenkel <fuzzy@duenkel.com>
Message-ID: <ARoM4.2736$5b3.772976@homer.alpha.net>
Source record: 61197

I LOVE those old Carl and Jerry episodes, and am missing most of the 1959, 1960, 1961 issues. Anyone know where I can get them?

Sorry if I'm not posting to the correct newsgroup. Please tell me if I should ask elsewhere.

Fuzzy

fuzzy@duenkel.com

3275. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <39021D61.30BFD4D6@eznec.com>
Source record: 61198

There are bound to be lots of Carl and Jerry fans here, but you might
also try the rec.radio.amateur.misc and rec.radio.shortwave newsgroups.

When you get all the episodes together, do some copyright negotiating
with PopTronics and make 'em into a book. I'll be your first customer.

Good luck!

Roy Lewallen, W7EL

Fuzzy or Shirley Duenkel wrote:
>
> I LOVE those old Carl and Jerry episodes, and am missing most of the 1959,
> 1960, 1961 issues. Anyone know where I can get them?
>
> Sorry if I'm not posting to the correct newsgroup. Please tell me if I
> should ask elsewhere.
>
> Fuzzy
>
> fuzzy@duenkel.com

3276. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8dt52r01b8j@news1.newsguy.com>
Source record: 61199

Roger Leone wrote in message ...
>the same DC power input. In other words, they can stand more abuse. You
>can usually get over 5 watts out.

With a 7400 for a driver I think he's going to have a devil of a time
getting 5 watts, at least in one stage. Plus he's going to need a ton of
filtering at that power. Better to go for a watt or so where some simple
filtering will result in tolerable harmonics.

--xpyttl

3277. Re: Vacuum tube down converters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3901f97d.445878774@news.online.no>
Source record: 61200

On 22 Apr 2000 12:22:59 -0700, ve6xtc@ecn.ab.ca () wrote:

>
>
> Hi folks;
> Does anybody have a schematic for a simple vacuum tube
>down converter? I'd like to try and build one for converting 50 MHz
>signals down to 10 MHz so I can listen to any band openings using my short
>wave radio. Arnie Coro, CO2KK has a transister model but I tend to fry
>transisters. Because of my poor vision, I tend to melt my glasses and
>burn my nose a lot too.
> Yours,
>
>Bruce Atchison, electronic musician, freelance writer, and rabbit fanatic.
>ve6xtc@freenet.edmonton.ab.ca

and what sort of valves do you intend to use? 12AT7, 6BQ7, 6AK5, 6CW4
6DS4, E88CC, CCa or else?

3278. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Lutan <nosnot@nosnot.com>
Message-ID: <39021FC1.66A9@nosnot.com>
Source record: 61201

Fuzzy or Shirley Duenkel wrote:
>
> I LOVE those old Carl and Jerry episodes, and am missing most of the 1959,
> 1960, 1961 issues. Anyone know where I can get them?
>
> Sorry if I'm not posting to the correct newsgroup. Please tell me if I
> should ask elsewhere.

Check the library at your local university. At my old school we have the entire collection of Popular Electronics in bound volumes---besides many other electronic hobbyist magazines (including QST). Most likely you'll find PE in a microform of some sort. Practically all schools have their card catalogs on the internet so check their holdings by going to the school's web site then to the library. Hey, I've even found the complete collection of Electronics Illustrated---although at another school a good drive from here.

As an alumni member of our library I've spent many hours re-reading Carl and Jerry. I have to admit, there was quite a bit of sarcasm in those stories that I never caught when I read them in my younger day.

I've started to copy those articles with hopes of printing the complete collection---I'm sure there are many out there that would like to re-read them

Yes, I have to admit, radio was wonderful back then... gosh how those old QST choke me up...

3279. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: "Geoffrey G. Rochat" <geoff@pkworks.com>
Message-ID: <8dtbgb$8pc$1@news.kersur.net>
Source record: 61202

<snip>

>Dick's posting reminds me...long ago I had a book titled "The Boy
>Electrician." It had a wealth of interesting projects in it of the
>sort that boys--and others--tinkered with in the early 1900's, but
>somewhere along the way, I lost it. Darn. However, in searching some
>used-book web sites, I discovered that it has apparently been
>reprinted, and you can probably find a copy at a reasonable price. It
>would be a nice addition to a "spark museum" I think, even if you
>don't manage an original edition.
>
>Cheers,
>Tom

"The Boy Electrician", by Alfred P. Morgan, circa 1940. I too
remembered it from boyhood, and recently bought my reprint copy from
Lindsay Books, www.lindsaybks.com. Delightful, absolutely delightful.

I'm waiting for someone to reprint Morgan's "The Boys' First {Second and
Third} Book of Radio and Electronics." (I managed to snag used copies
from junior high school library sales: The books' titles are not
politically correct these days, and unfortunately, school administrators
DO judge books by their covers.)

3280. 3SK184 ? Information needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: wb4lnm@aol.com
Message-ID: <20000422193924.19366.00001845@ng-ci1.aol.com>
Source record: 61203

The 3SK184 appears to be a popular UHF / VHF frond end LNA for commercial amateur radio equipment. I can find that RF Parts carries them, but can't find the manufacturer or a data sheet on the internet. I have tried Hitachi, Mitsubishi, Toshiba, Sony and Sanyo with no luck.

Anyone know who is the manufacturer and if / where there is a data sheet on the internet? Thanks in advance.

John...
WB4LNM

John H. Klingelhoeffer
WB4LNMxx@aol.com (remove xx for real address)

3281. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <5TqM4.1213$Hc7.38463@news.corecomm.net>
Source record: 61204

Roy Lewallen wrote in message
>That's the purpose of the very thin tape I'm familiar with. I was
>curious about the 5 mil thick stuff. Maybe it's just for bigger pipe
>with sloppier threads.

That's correct. It's recommended for 1-1/5 inch dia and larger pipe threads.

The very thin white stuff mic'd out at 2 mils. The pink tape mic'd out at 3 mils and the yellow tape mic'd out at 4.5 mils. The pink tape is labeled 1/2"x260" mil spec T27730! and cost $2.50 a roll. UL approved and made in China. All are 1/2 inch wide. I do not know how much tape is on the roll. I didn't unroll it to measure it! Hi. I suspect that the 260 refers to 260 inches.

73, AL

3282. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Fuzzy or Shirley Duenkel <fuzzy@duenkel.com>
Message-ID: <wosM4.2782$5b3.778953@homer.alpha.net>
Source record: 61205

About twenty years ago, I contacted John T. Frye, the author (by snail mail) and asked if he ever put them together in a book form. He said that he didn't and PE had the rights to them. I guess there were some hard feelings between him and the magazine, so he stopped writing them.

I suppose he's a silent key by now. I'm not a ham anymore, so I don't have a callbook to look him up. I suppose I could try the internet, too.

Thanks for the response. I'll check our local library. I don't know how to get articles from microfilm to full-size hard copy, though.

Fuzzy

3283. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <39026BAB.5EA99EBE@eznec.com>
Source record: 61206

Fuzzy or Shirley Duenkel wrote:
> . . .
> Thanks for the response. I'll check our local library. I don't know how to
> get articles from microfilm to full-size hard copy, though.

Technical libraries I've visited have a microfilm viewer which has a
built-in printer -- press a button and you get a hard copy. If your
library doesn't have one of these, they've surely got some other means
to do it.

Roy Lewallen, W7EL

3284. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: "Gerhard W. Hoffmann" <ghf@berlin.snafu.de>
Message-ID: <3900D752.6D738E42@berlin.snafu.de>
Source record: 61277

```
> Has anyone ever mounted the metal-case U310 by drilling a hole in a
> pc board and soldering the can in place? I'm guessing the jfet inside
> might not survive the operation,

Worked for me. Solder at the source tab.

73, Gerhard

--
gerhard@hochfrequenz.com _____
on the air: DK4XP \ \________o_\_______ | CECI N'EST PAS
in the air: D-1441 \______ --===== .]]]]|> UN PIPER
° `------`0'' |
```

3285. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: tiuk@aol.com
Message-ID: <20000421203430.05065.00002909@ng-fx1.aol.com>
Source record: 61278

Fritz,

Try the Antique Wireless Association at

http://www.antiquewireless.org/

and search thier web site for "Spark".

73,

Roman N2CDD

3286. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3900F6E2.DB8DBF82@webaxs.net>
Source record: 61279

J309, because i got 150 at $0.20 each :)

J M Noeding wrote:
>
> On Fri, 21 Apr 2000 12:00:23 GMT, Xnospam@oceanfree.net (Eamon
> Skelton) wrote:
>
> >>What is your favorite small-signal, low-noise FET
> >>for 3-30MHz?
> >>Not being an expert, and studying the tech sheets,
> >>and looking at applications on the internet and in
> >>the ARRL Handbooks, here is what I've found:
> >>
> >
> >Jfet
> >J113, because I got few hundred of them for free.
> >
> >DG Mosfet.
> >BF961 or BF981.
> >
> >73, Ed. EI9GQ
> >
> >
> JFET: MPF102 and BF245 because they are inexpensive,
>
> Mosfet: BF905 because I got 100 for free, also got some douzen 40673,
> but they are not so easy to mount
>
> 73 JM LA8AK

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3287. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <390104E9.F9F2F5C1@flash.net>
Source record: 61280

Hi Rick,
I believe Radio Shack is currently carrying the 2N3553, which would make a good HF QRP output transistor, with a heat sink on it. Another good one is the 2N5109. Any one you choose must have a heat sink if you want to try for 5 watts output. A 2N3866 would also probably work, but it is not so stable as the first two. I don't know what Alltronics is offering for transistors.
Steve AA7U

Rick Haub wrote:
>
> I found a great, simple QRP schematic on a web site. It's supposed to
> output about 5 watts and used a 7400 as the driver into the final
> transistor. Unfortunately the notes only say that "any rf transistor
> will do". I'm pretty new to hamming and I don't know what would be a
> good choice. The author of the web site has no e-mail link so I can't
> ask him. I get a lot of my stuff from (silver mica caps and tubes)
> hppt://alltronics.com , they have a lot of transitors and I'm sure at
> least one of them will do. Any suggestions?
>
> Thanks,
>
> Rick KC0GIX

3288. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <39010524.5C99CEEC@flash.net>
Source record: 61281

Hi Rick,
Forgot to ask, what's the URL for the webpage with the simple QRP schematic?
Steve

Rick Haub wrote:
>
> I found a great, simple QRP schematic on a web site. It's supposed to
> output about 5 watts and used a 7400 as the driver into the final
> transistor. Unfortunately the notes only say that "any rf transistor
> will do". I'm pretty new to hamming and I don't know what would be a
> good choice. The author of the web site has no e-mail link so I can't
> ask him. I get a lot of my stuff from (silver mica caps and tubes)
> hppt://alltronics.com , they have a lot of transitors and I'm sure at
> least one of them will do. Any suggestions?
>
> Thanks,
>
> Rick KC0GIX

3289. Re: Discontinued IC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: wandrangus@aol.com
Message-ID: <20000421220951.26824.00003185@ng-cg1.aol.com>
Source record: 61282

Yes, I was the one posting that info - National Semiconductor is obsoleting the LM3900. I know that part is second-sourced by TI, Motorola, and RCA, so we may not be totally out of luck, but I wouldn't use that part in a new design.

Dave KC3ZQ

3290. WTB: 6CA7's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: booberusa@webtv.net
Message-ID: <26923-39016DD8-1@storefull-101.private.bryant.webtv.net>
Source record: 61283

Looking for some Sylvania 6CA7's

Thanks,
Jeff

3291. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <39017B71.E2C414CF@netdoor.com>
Source record: 61284

I'm not sure of this, but I think the tape that plumbers use to seal
threaded connections is teflon.

Butch KF5DE

Al Lorona wrote:

> Does anybody know of a source for a roll of teflon tape? I'm looking for
> just a few mils thick, approximately 1/2 inch wide tape.
>
> Tnx, AL, e-mail alforo@megsinet.net

3292. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Bill Cromwell <bcromwell1@earthlink.net>
Message-ID: <k2iM4.74569$q67.1270210@newsread2.prod.itd.earthlink.net>
Source record: 61285

Automobile alternators look like a reasonable bet for a wind plant, but they have to spin too fast before anything happens. I haven't done this .... yet .... but these links should get you started nicely:

news:alt.energy.homepower
news:alt.energy.renewable
http://www.homepower.com/index.htm

Bill KU8H

3293. Antenna switch,

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Derstine <derstine@fast.net>
Message-ID: <sg3g4gfjl6e132@corp.supernews.com>
Source record: 61286

Hello Group,
I've finally put up my tower, (told the wife it was easier to mow around in the vertical position instead of laying down in the lawn). I put up four runs of hard-line up to various antennas, all in the 2 meters / 440 range.
I need some questions answered about antenna switchers.
1. Can I build one cheaper than buying one? (depends on what's in my junk box maybe?)
2. Are antenna switchers rated for HF or VHF/UHF?
3. I have a old Heath kit remote antenna switcher that mounts on top of the tower. It seems to me that the signal runs through the different relays that switch to the different antenna. Doesn't that effect the signal with a huge impedance bump on the higher frequencies?
I would be interested in a source of plans or circuit to build this little project.
Thanks for letting me pick your brains.
N3GGV
Jerry

3294. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <3901D18B.365ADD37@eznec.com>
Source record: 61287

That's the purpose of the very thin tape I'm familiar with. I was
curious about the 5 mil thick stuff. Maybe it's just for bigger pipe
with sloppier threads.

Roy Lewallen, W7EL

Butch Magee wrote:
>
> I'm not sure of this, but I think the tape that plumbers use to seal
> threaded connections is teflon.
>
> Butch KF5DE
>
> Al Lorona wrote:
>
> > Does anybody know of a source for a roll of teflon tape? I'm looking for
> > just a few mils thick, approximately 1/2 inch wide tape.
> >
> > Tnx, AL, e-mail alforo@megsinet.net

3295. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Jimi Greydog <ringlord@earthling.net>
Message-ID: <t7l3gs0is6d818935j3thkegn3kptemtc7@4ax.com>
Source record: 61288

Hi..

I used to have lots of schematics for those things.. but I have no idea where to find them any more.. HOWEVER the modern versions are much more useable and easily subbed in the devices.. in fact all the new signal transsistors are more freq responsive and wider ranged than the old sb-100...

Yes, I love the old cheap homebrew stuff.. QRP and AM and CW only and hey, some of those superregen recievers were more selctive than my more modern midland...

Drop me a note at :
mysticjim@netzero.com

Jim in Oregon
(KC7SVQ)

On 21 Apr 2000 22:40:49 GMT, arm@helix.nih.gov (Andrew R Mitz) wrote:

>HELIO SAKAYA (enatec@worldnet.att.net) wrote:
>: Anyone out there interested in homebrewing with vintage transistors?
>: Remember superegenerative 10M receiver circuit using surface barrier
>: transistors?
>: I'm interested in swaping parts and schematics.
>: Helio

3296. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000422131916.18648.00006736@ng-cg1.aol.com>
Source record: 61289

My father in law built one that looked like a Dutch windmill. The blades were about 6 ft long. He used an alternator and lawnmower battery. For him it was just an eye catcher for his business. I turned in the wind during the day and lit up some lights at night.

3297. Hamcom Interface 2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: cvsoelen <cv.s@net.HCC.nl>
Message-ID: <3901E311.56C364EB@net.HCC.nl>
Source record: 61290

Hello,
Walter PE1ABR publishing this day a drawing from a very good
working interface for receiving and transmitting RTTY, FEC, CW, FAX etc.
(also for
working with HAMCOM and free to download at our web-site).
Low cost, and easy to make.
On http://www.inter.nl.net/hcc/Shortwave
Cheers, cor van soelen.

3298. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <qQIM4.986$yY1.26139@news.inreach.com>
Source record: 61291

A good source of RF power transistors is junk CB radios. The driver and final amp make good QRP transmitters. The final amp is usually rated for pretty good voltage since AM operating voltages are higher than CW or FM at the same DC power input. In other words, they can stand more abuse. You can usually get over 5 watts out.

Many CB radios are thrown away or given away for free...I have salvaged many good parts from them, including the synthesizer chip, which was also used in an number of ham rigs.

Roger K6XQ

3299. Vacuum tube down converters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: ve6xtc@ecn.ab.ca
Message-ID: <3901ee03@ecn.ab.ca>
Source record: 61292

Hi folks;
Does anybody have a schematic for a simple vacuum tube
down converter? I'd like to try and build one for converting 50 MHz
signals down to 10 MHz so I can listen to any band openings using my short
wave radio. Arnie Coro, CO2KK has a transister model but I tend to fry
transisters. Because of my poor vision, I tend to melt my glasses and
burn my nose a lot too.
Yours,

Bruce Atchison, electronic musician, freelance writer, and rabbit fanatic.
ve6xtc@freenet.edmonton.ab.ca

3300. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <390161bd.407024873@news.online.no>
Source record: 61293

On Sat, 22 Apr 2000 00:33:54 +0200, "Gerhard W. Hoffmann"
<ghf@berlin.snafu.de> wrote:

>
>> Has anyone ever mounted the metal-case U310 by drilling a hole in a =
>
>> pc board and soldering the can in place? I'm guessing the jfet inside =
>
>> might not survive the operation,
>
>Worked for me. Solder at the source tab.
>
>73, Gerhard
>
>-- =
>
>gerhard@hochfrequenz.com _____ =
>
>on the air: DK4XP \ ________o________ | CECI N'EST PAS
>in the air: D-1441 ______ --=3D=3D=3D=3D=3D .]]]]|> UN PIP=
>ER
> =B0 `------`0'' |

mounted BFT66 in this way

it has now lasted 20 years as 2m pre-amplifier

73
jan-martin
LA8AK

3301. Surface mount articles link

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-22 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <3901FAB7.3A855D1D@bellsouth.net>
Source record: 61294

Hobby surface mount construction articles.
http://www.arrl.org/tis/info/surface.html

3302. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Thomas C. Sefranek" <tcs@cmcorp.com>
Message-ID: <39037BA0.3FEF6C99@cmcorp.com>
Source record: 61145

Alex Turner wrote:

> I would like to build a solid state amp in the 40-70 watt range. Does anyone
> have any experience with such and no of a good design.
>
> 73
> Alex,N4BYJ

Try mentioning what frequency (s) you want to amplify, the power source, the
drive level.

--
*
| __O Thomas C. Sefranek tcs@cmcorp.com
|_-\<,_ Amateur Radio Operator: WA1RHP
(*)/ (*) Bicycle mobile on 145.41, 448.625 MHz

http://hamradio.cmcorp.com/inventory/Inventory.html
http://www.harvardrepeater.org

3303. Re: Your favorite FET?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <39038EE7.4C57B0D5@sympatico.ca>
Source record: 61146

I use the J310 in television IF amplifier circuits because in the common
gate configuration, the output to input isolation is 20 DB or better.
Regards! VE2AUC

Ralph E. Carter wrote:

> What is your favorite small-signal, low-noise FET
> for 3-30MHz?
> Not being an expert, and studying the tech sheets,
> and looking at applications on the internet and in
> the ARRL Handbooks, here is what I've found:
>
> MPF102 This is inexpensive, and would probably work
> fine anywhere in an HF preamp or receiver.
> Its published tolerances are wide, though.
> Its gfs is very low.
>
> J310 This looks super-primo to me. If the tech data
> can be believed. The cost is still OK, but there
> are fewer sources. Gfs is high. Using these in
> the first stage, with grounded gate, seems popular.
> Why? (U310 is in a metal can.) There is a graph
> of its intermod performance in the tech data I have.
> It is drastically better than the similar graphs
> in the files for other JFETs I've seen (I can't
> remember which.) This suggests that it could tolerate
> large signals and would be easier to use in that
> first preamp stage.
> When I've run models of this in SPICE, its gain has
> tended to be low. I think lower gain with greater
> dynamic range would be easier to work with.
>
> 40673 This is an extremely good dual gate mosfet that
> NTE222 would be fun to play with. It cost ten times
> as much. If one needed this function, couldn't it
> be done almost as well with totem-poled JFETs?
>
> 2N4416 I see this is very popular. I don't know why.
>
> 2N5484 These aren't mentioned as often. I don't know why.
> 2N5485 The specs look very good to me.
> 2N5486
> 2N5670
> 2N5668
> 2N5669

>
> Studying this issue is difficult, because I'm not sure which
> specs to favor.
> Any of these would work very well. I like the J310 best.
> Charles Kitchin, N1TEV, seems to know what he's doing. In his
> circuits I've seen, he has used 2N4416, J310, MPF102, and the
> BJT 2N2222, all in similar applications (preamps and simple
> receivers). These four devices are quite different.

3304. Wanted:KK7B R2 board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <3903A663.B9EBE1E8@ica.net>
Source record: 61147

Anyone have a KK7B R2 receiver board that's collecting dust ?
(Built or unbuilt kit.) I have a sudden impulsive urge to play around
with one.
Please state condition and asking price.

Hugh VA3TO
Please e-mail va3to@rac.ca

3305. HP Plotter Printing on Copper Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Harry Brown <hbrown@voicenet.com>
Message-ID: <r7rM4.233$wc7.19513@news2.voicenet.com>
Source record: 61207

I made a posting about a week ago requesting info on an article in QST telling how to use an HP plotter to write on copper PC boards.

I finally found the missing article on plotting directly to copper boards.

May 1997 QST, page 72. "Fast and Easy Printed Circuit Boards" by Steve Link, KJ4UU. He used a HP 7475A Plotter with modified Stadedtler Lumocolor 318 pens.

Hope this helps you if you decide to try this technique.

I've seen the plotters go for as little as $10 at hamfests.

73, Harry, W3IIT
hbrown@voicenet.com

3306. Re: 2 JFETS vs. 2 gate MOSFET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <390264C8.B880F5E9@flash.net>
Source record: 61208

Remember that the case of the U310 is connected to one of the internal
elements; I don't remember which one. Make sure your particular circuit
configuration can function with that particular element grounded!
Steve

Nick Caruso wrote:
>
> Roy Lewallen wrote:
>
> > "Ralph E. Carter" wrote:
> > >
> > > One example is in the ARRL Handbook, 1998,
> > > "A Regenerative Receiver for Beginners", by
> > > Charles Kitchin, N1TEV.
> > > Its first two stages are a cascode: Q1 is a
> > > common source voltage amp, Q2 is a grounded
> > > gate buffer. The drain of Q1 is connected
> > > directly to the source of Q2- they form a
> > > "totem pole".
> > > It looks like these are doing exactly what
> > > a dual-gate MOSFET could do here.
> > >
> > > The MOSFET would be interesting and neat,
> > > (at ten times the cost). But am I right,
> > > that the JFETs are functionally equivalent
> > > here?
> >
> > Yep.
> >
> > Roy Lewallen, W7EL
>
> All this talk about jfets has reminded me of a question that has troubled my
> mind from time to time.
>
> Has anyone ever mounted the metal-case U310 by drilling a hole in a pc board and
> soldering the can in place? I'm guessing the jfet inside might not survive the
> operation, but if it did this would be a nice mechanically sturdy way of
> mounting the jobbies. Or maybe silver-bearing epoxy?
>
> best regards,
> ncc kb1dej
>
> PS anyone know the origin of the term "cascode"?

3307. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2204002308330001@usrh-5-185.hip.cam.org>
Source record: 61209

In article <wosM4.2782$5b3.778953@homer.alpha.net>, "Fuzzy or Shirley
Duenkel" <fuzzy@duenkel.com> wrote:

> About twenty years ago, I contacted John T. Frye, the author (by snail mail)
> and asked if he ever put them together in a book form. He said that he
> didn't and PE had the rights to them. I guess there were some hard feelings
> between him and the magazine, so he stopped writing them.
>
> I suppose he's a silent key by now. I'm not a ham anymore, so I don't have
> a callbook to look him up. I suppose I could try the internet, too.
>
> Thanks for the response. I'll check our local library. I don't know how to
> get articles from microfilm to full-size hard copy, though.
>
> Fuzzy

Don Lancaster, his website is http://www.tinaja.com mentioned John T. Frye
a few months back in one of the sci.electronics.* newsgroups in a thread
about the hobby electronic magazines (there have been a few in recent months.
Unless he was confusing Frye with someone else, he seemed to have some
insider information that he only hinted at; Don of course was a
regular contributor to Popular Electronics 35 or so years ago.

I was under the impression the Carl and Jerry stories ended because
the magazine went through one of it's periodical morphings. In the
early/mid seventies, John T. Frye had a column/series in Popular electronics
about electronic repair. It was similar in fashion to the Carl & Jerry
stories, in that he had a fictional story to do some teaching. It was
based in Mac's repair shop, and had a grizzled old tech, and a young
and fresh out of school assistant, and their receptionist.

I'm not sure when it started, or how long it ran for. At the end
of '71, Electronic World was merged into Popular Electronics, and
I lost interest for a while. I'm under the impression that John T.
Frye might have been writing regularly for Electronic World (which
was published by the same company as PE) after the Carl & Jerry
stories ended.

I don't follow copyright laws, but the I know they used to be more
limited than nowadays. The stories were published 35 to 40 years ago,
and that might put them into a copyable position now or soon.

To confuse the issue further. The Popular Electronics that ran
the Carl & Jerry stories shutdown in 1983 or '84, having followed
the computer boom it started with the Altair 8800 in January 1975.
The magazine morphed a couple of times, including changing it's

name to Computers and Electronics, and trying to focus more on computers; they seemed to be trying for the consumer market and they lost the existing readership without gaining new readers.

The Popular Electronics that was published until December 1999 was not the same magazine. Some time after PE died, Gernsback started a bi-monthly hobby electronic magazine, Hands-On Electronics. After a couple of years, it went monthly and they changed it's name to Popular Electronics, and maybe rearranged tiself a bit to resemble the PE of old. I vaguely recall the changeover, and I always assumed they had gotten the name some years after the original PE shut down. If I recall properly, there was an editorial where they talked about it, and the wording was such that it sounded like they had just gotten the name, some years after PE stopped being published.

So did Gernsback just get the name of the magazine, or did it buy the assets? That might have relevance where copyright is concerned.

And of course, Popular Electronics doesn't exist anymore, for the second time. Gernsback merged Popular Electronics II with Electronics Now (was Radio Electronics), and renamed the whole thing Poptronics, starting with the January 2000 issue.

It seems to be more PE than EN, and Don Lancaster mentioned about a month ago that they don't want his column anymore.

Michael VE2BVW

3308. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2204002312310001@usrh-5-185.hip.cam.org>
Source record: 61210

In article <qQlM4.986$yY1.26139@news.inreach.com>, "Roger Leone"
<arleone@inreach.com> wrote:

> A good source of RF power transistors is junk CB radios. The driver and
> final amp make good QRP transmitters. The final amp is usually rated for
> pretty good voltage since AM operating voltages are higher than CW or FM at
> the same DC power input. In other words, they can stand more abuse. You
> can usually get over 5 watts out.
>
> Many CB radios are thrown away or given away for free...I have salvaged many
> good parts from them, including the synthesizer chip, which was also used in
> an number of ham rigs.
>
> Roger K6XQ

I admit that CB sets can be a good source of parts, and I've found them
both in the garbage or for five dollars or less at garage sales and hamfests.

But the last two CB sets I saw this way did not look like the final
transists would be in good shape. The circuit boards were partially
burned. And as I saw your post, I couldn't help but think that maybe
someone tried to boost the power, and burned something that way. It
strikes me that the final in a CB set may have already taken some
abuse.

Of course, what I'd really like to find in the garbage is an SSB CB
set.

Michael VE2BVW

3309. Re: Need help with NHRC4 controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: The Martell's <mike-n-terri@erols.com>
Message-ID: <39028073.5215900D@erols.com>
Source record: 61211

Did you try buying another from the NHRC group?? The code may also be
posted at the web site www.nhrc.net.

"L.K." wrote:

> I have a strange situation. Quite a while back I purchased an NHRC-4
> repeater controller kit. It sat on the shelf for quite a while waiting
> to be used. I recently started construction and discovered the PIC
> processor is blank!
>
> Does anyone happen to have the binary image or Intel Hex file for this
> chip?
>
> Larry

3310. resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <39032001.450303161@news.erols.com>
Source record: 61212

I was reading through some of the old W1FB articles in QRP Classics. At one point he discusses the use of low value resistors in HF circuits to suppress possible vhf oscillations/parasitics. How does this work? Is is because the resistors have some inductance that affets the vhf? Does this mean that ordinary old carbon resistors wouldn't work in this application?

Thanks, 73 Bill N2CQR

3311. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Lutan <nosnot@nosnot.com>
Message-ID: <3902E21E.19C9@nosnot.com>
Source record: 61213

Michael Black wrote:
>
> Don Lancaster, his website is http://www.tinaja.com mentioned John T. Frye
> a few months back in one of the sci.electronics.* newsgroups in a thread
> about the hobby electronic magazines (there have been a few in recent months.
> Unless he was confusing Frye with someone else, he seemed to have some
> insider information that he only hinted at; Don of course was a
> regular contributor to Popular Electronics 35 or so years ago...

Thanks for the chronology of PE... it all comes back to me now... I guess that's why I liked Electronics Illustrated more that PE---it was so much less stuffy! Besides that, EI graphics were so much better and the projects were more enjoyable and accessible to mainstream builders---and not to forget UNCLE TOM'S CORNER! Odd that PE is remembered so well and EI has been seemingly forgotten although if the subject is brought up in informal meetings EI never fails to bring back fond memories.

It was nice to have have had a hand in the reprint (original wiring diagrams and pictorials) of a 1968 W5LET EI transmitter project some years back in CQ magazine---it was my attempt at bringing back to memory Electonics Illustrated magazine.

3312. Re: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <kNCM4.30564$WF.1359852@bgtnsc04-news.ops.worldnet.att.net>
Source record: 61214

Tell me about the Carl and Jerry episodes.
Inquiring (younger) minds want to know.

--
Mike Knowlton
Panama City Fl.

3313. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8duv3v$o6v$1@nnrp1.deja.com>
Source record: 61215

In article <39032001.450303161@news.erols.com>,
n2cqr@erols.com (Bill Meara) wrote:
> I was reading through some of the old W1FB articles in QRP Classics.
> At one point he discusses the use of low value resistors in HF
> circuits to suppress possible vhf oscillations/parasitics. How does
> this work? Is is because the resistors have some inductance that
> affets the vhf? Does this mean that ordinary old carbon resistors
> wouldn't work in this application?
>
> Thanks, 73 Bill N2CQR
>

The resistor must be just NON-INDUCTIVE for this purpose. The resistor introduces some loss in the circuit in such a way that it damps the parasitics without jeopardizing the normal circuit gain. Carbon resistors are good for this sake.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3314. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8duv4b$o71$1@nnrp1.deja.com>
Source record: 61216

In article <39032001.450303161@news.erols.com>,
n2cqr@erols.com (Bill Meara) wrote:
> I was reading through some of the old W1FB articles in QRP Classics.
> At one point he discusses the use of low value resistors in HF
> circuits to suppress possible vhf oscillations/parasitics. How does
> this work? Is is because the resistors have some inductance that
> affets the vhf? Does this mean that ordinary old carbon resistors
> wouldn't work in this application?
>
> Thanks, 73 Bill N2CQR
>

The resistor must be just NON-INDUCTIVE for this purpose. The resistor introduces some loss in the circuit in such a way that it damps the parasitics without jeopardizing the normal circuit gain. Carbon resistors are good for this sake.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3315. Re: WTB: 6CA7's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8duvqt$p1a$1@nnrp1.deja.com>
Source record: 61217

In article <26923-39016DD8-1@storefull-101.private.bryant.webtv.net>,
booberusa@webtv.net (JJG ...) wrote:
> Looking for some Sylvania 6CA7's
>
> Thanks,
> Jeff
>
>

Try TubeWorld at http://www.tubeworld.com/tubes.html
or Electrosonic at http://ioe.e-sonic.com/order/QuickSearch.asp
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3316. Re: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3902F274.469EB13C@dialpoint.net>
Source record: 61218

In the magazine every month there was a story about two teenage boys. Not sure if the stories ended or not as I quit the zine about 25 years ago. They were in high school when I started reading around 1961 and had gotten to be freshmen in college about 15 years later..One story comes to mind where they went to buy a car and did things like using a microphone to listen to a bad wheel bearing. Another time a FBI agent needed them to erase a tape that a spy had. They built a device in a attache case out of a big coil of wire and a dc to ac converter and as they were getting on a train they rubbed that against the case the spy was carring. Their first week in college got them in trouble with the dean. They put a speaker in a mail box and ran some fine wires to the dorm room . They used it to talk to people. One was the dean of the college.

They did not use the electronics to get into trouble , but gave some ideas on what could be done with simple around the home devices in many cases. BTW they were also suspose to be ham operators.

AMDX wrote:
>
> Tell me about the Carl and Jerry episodes.
> Inquiring (younger) minds want to know.
>
> --
> Mike Knowlton
> Panama City Fl.

3317. French sstv site (in french and english)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: jerome <jerome.fsstv36@free.fr>
Message-ID: <5zDM4.2662$Kr7.4095015@nnrp6.proxad.net>
Source record: 61219

I udapte my french sstv site at:

Http://jerome.fsstv36.free.fr

73'51 88 de 14FSSTV36

3318. Re: 3SK184 ? Information needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8dv1u6$r5p$1@nnrp1.deja.com>
Source record: 61220

In article <20000422193924.19366.00001845@ng-ci1.aol.com>,
wb4lnm@aol.com (WB4LNM) wrote:
> The 3SK184 appears to be a popular UHF / VHF frond end LNA for
commercial
> amateur radio equipment. I can find that RF Parts carries them, but
can't find
> the manufacturer or a data sheet on the internet. I have tried
Hitachi,
> Mitsubishi, Toshiba, Sony and Sanyo with no luck.
>
> Anyone know who is the manufacturer and if / where there is a data
sheet on the
> internet? Thanks in advance.
>
> John...
> WB4LNM
>
> John H. Klingelhoeffer
> WB4LNMxx@aol.com (remove xx for real address)
>

Partminer tells that this device was manufactured by
Matsushita/Panasonic (not found in its homepage too).
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3319. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <39033fb3.458403940@news.erols.com>
Source record: 61221

On Sun, 23 Apr 2000 13:51:11 GMT, py1ll@my-deja.com wrote:

>In article <39032001.450303161@news.erols.com>,
> n2cqr@erols.com (Bill Meara) wrote:
>> I was reading through some of the old W1FB articles in QRP Classics.
>> At one point he discusses the use of low value resistors in HF
>> circuits to suppress possible vhf oscillations/parasitics. How does
>> this work? Is is because the resistors have some inductance that
>> affets the vhf? Does this mean that ordinary old carbon resistors
>> wouldn't work in this application?
>>
>> Thanks, 73 Bill N2CQR

Here's some additional info on the use of resistors. I'm still not
clear how this works:

DeMaw put a 10 ohm resistor near the collector of a class A amplifier
designed for operation at 7 MHz, explaining, "At 7 MHz the resistor
offers minor resistance to the signal, but at vhf it looks like a high
impedance, this prevents parasitics."

My question is, HOW does this work? Why is the resistor only a minor
resistance at 7 MHz but high impedace at vhf?

73 Bill N2CQR
http://www.erols.com/wmeara

3320. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <XdEM4.33986$004.74063@news02>
Source record: 61222

The traditional VHF parasitic suppression gizmo is/was about a 10 to 30 ohm resistor with three or four turns of number wire on the body of the resistor. At the normal operating frequency the resistor was shorted out by the coil. At VHF the coil looked like an open circuit and the resistor came in to play.

Even a small resistance in series with the output tank would de-Q it enough to drop the gain at VHF. Once you got rid of the gain you got rid of the parasitic oscillation.

These days you might see ferrite beads used to do more or less the same sort of thing.

Bob

"Bill Meara " <n2cqr@erols.com> wrote in message
news:39033fb3.458403940@news.erols.com...
> On Sun, 23 Apr 2000 13:51:11 GMT, py1ll@my-deja.com wrote:
>
> >In article <39032001.450303161@news.erols.com>,
> > n2cqr@erols.com (Bill Meara) wrote:
> >> I was reading through some of the old W1FB articles in QRP
Classics.
> >> At one point he discusses the use of low value resistors in HF
> >> circuits to suppress possible vhf oscillations/parasitics. How
does
> >> this work? Is is because the resistors have some inductance that
> >> affets the vhf? Does this mean that ordinary old carbon
resistors
> >> wouldn't work in this application?
> >>
> >> Thanks, 73 Bill N2CQR
>
>
> Here's some additional info on the use of resistors. I'm still not
> clear how this works:
>
> DeMaw put a 10 ohm resistor near the collector of a class A
amplifier
> designed for operation at 7 MHz, explaining, "At 7 MHz the resistor
> offers minor resistance to the signal, but at vhf it looks like a
high
> impedance, this prevents parasitics."
>
> My question is, HOW does this work? Why is the resistor only a

minor
> resistance at 7 MHz but high impedace at vhf?
>
> 73 Bill N2CQR
> http://www.erols.com/wmeara

3321. Re: HP Plotter Printing on Copper Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "John Kirk, VE6XT" <jakirk@calcna.ab.ca>
Message-ID: <Pine.A41.4.05.10004230910450.12874-100000@srv1.calcna.ab.ca>
Source record: 61223

Yes, if anyone wants to play with one, I have one here that can be had for
the price of shipping...
73
John

On Sun, 23 Apr 2000, Harry Brown wrote:

> I made a posting about a week ago requesting info on an article in QST
> telling how to use an HP plotter to write on copper PC boards.
>
> I finally found the missing article on plotting directly to copper boards.
>
> May 1997 QST, page 72. "Fast and Easy Printed Circuit Boards" by Steve Link,
> KJ4UU. He used a HP 7475A Plotter with modified Stadedtler Lumocolor 318
> pens.
>
> Hope this helps you if you decide to try this technique.
>
> I've seen the plotters go for as little as $10 at hamfests.
>
> 73, Harry, W3IIT
> hbrown@voicenet.com
>
>
>
>

3322. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <3903151B.558C498@bellsouth.net>
Source record: 61224

Bill Meara wrote:
>
> On Sun, 23 Apr 2000 13:51:11 GMT, py1ll@my-deja.com wrote:
>
> >In article <39032001.450303161@news.erols.com>,
> > n2cqr@erols.com (Bill Meara) wrote:
> >> I was reading through some of the old W1FB articles in QRP Classics.
> >> At one point he discusses the use of low value resistors in HF
> >> circuits to suppress possible vhf oscillations/parasitics. How does
> >> this work? Is is because the resistors have some inductance that
> >> affets the vhf? Does this mean that ordinary old carbon resistors
> >> wouldn't work in this application?
> >>
> >> Thanks, 73 Bill N2CQR
>
> Here's some additional info on the use of resistors. I'm still not
> clear how this works:
>
> DeMaw put a 10 ohm resistor near the collector of a class A amplifier
> designed for operation at 7 MHz, explaining, "At 7 MHz the resistor
> offers minor resistance to the signal, but at vhf it looks like a high
> impedance, this prevents parasitics."
>
> My question is, HOW does this work? Why is the resistor only a minor
> resistance at 7 MHz but high impedace at vhf?
>
> 73 Bill N2CQR
> http://www.erols.com/wmeara

Me gusta http://www.erols.com/wmeara
Mucho quiero Astrocam!
Tengo quarenta anos.
Trabajo LA MISTICA DEL QRP. Entendo bien. Gracias.
Escucho HF en espanol.
Escucho en espanol porque no me gusta entiender politicas! Entiende?
Me gusta entiendo un poco musica y cultura.
Yo quiero mas bien, el espanol para HF.
Quiero mas bien emisors domesticas 60 meters.
Adios hermano.

3323. Re: Need help with NHRC4 controller

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: wa5kbq@yahoo.com
Message-ID: <39031604.254566@news.flash.net>
Source record: 61225

I found the problem. I didn't realize the 16F84's had a security lock
on the program area. I wanted to make a backup chip for my controllers
before I put them in service, but I can't.

NHRC has posted the code for their first controller, but no other.
Sometime back I received a nice reply basically stating that they
wanted to provide the source to the Ham community, but someone started
using it for profit and they had to make it off limits.

So much for trying to be nice...

Larry - WA5KBQ

On Sun, 23 Apr 2000 00:47:48 -0400, The Martell's
<mike-n-terri@erols.com> wrote:

>Did you try buying another from the NHRC group?? The code may also be
>posted at the web site www.nhrc.net.
>
>"L.K." wrote:
>
>> I have a strange situation. Quite a while back I purchased an NHRC-4
>> repeater controller kit. It sat on the shelf for quite a while waiting
>> to be used. I recently started construction and discovered the PIC
>> processor is blank!
>>
>> Does anyone happen to have the binary image or Intel Hex file for this
>> chip?
>>
>> Larry

3324. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <390310a1.84149996@news.azstarnet.com>
Source record: 61226

On Sun, 23 Apr 2000 18:30:44 GMT, n2cqr@erols.com (Bill Meara) wrote:

>On Sun, 23 Apr 2000 13:51:11 GMT, py1ll@my-deja.com wrote:
>
>>In article <39032001.450303161@news.erols.com>,
>> n2cqr@erols.com (Bill Meara) wrote:
>>> I was reading through some of the old W1FB articles in QRP Classics.
>>> At one point he discusses the use of low value resistors in HF
>>> circuits to suppress possible vhf oscillations/parasitics. How does
>>> this work? Is is because the resistors have some inductance that
>>> affets the vhf? Does this mean that ordinary old carbon resistors
>>> wouldn't work in this application?
>>>
>>> Thanks, 73 Bill N2CQR
>
>
>Here's some additional info on the use of resistors. I'm still not
>clear how this works:
>
>DeMaw put a 10 ohm resistor near the collector of a class A amplifier
>designed for operation at 7 MHz, explaining, "At 7 MHz the resistor
>offers minor resistance to the signal, but at vhf it looks like a high
>impedance, this prevents parasitics."
>
>My question is, HOW does this work? Why is the resistor only a minor
>resistance at 7 MHz but high impedace at vhf?
>
>73 Bill N2CQR
>http://www.erols.com/wmeara

Bill,

This is a complicated subject but in a nutshell...

When we draw schematics of our circuits, we put in resistors, inductors, capacitors, et cetera as if they are "pure" components. A resistor is only a resistor, we don't account for its lead inductance and shunt capacitance, for instance.

At lower frequencies, this simplification is appropriate, however, as the frequency increases, the effects of these "stray" or "parasitic" paths become more important and must be acounted for.

Active devices too are impure, a bipolar transistor for example, has internal inductances and capacitances that affect the frequency response of the device. If these internal reactances were not a problem, we could have just a few types

of transistors; a big fat die that works as a series pass transistor in a power supply could be used at 1 GHz in a power amp for instance. Alas, the big die's internal capacitance prevents its use at higher frequency.

Again keeping it simple, let's look at an NPN transistor. At DC, if we increase the current into the base, there is a proportional (greater) increase in the collector current. These currents operate in lockstep, ie, they are exactly "in phase."

As the frequency of operation increases, however, the internal reactances start to modify this nice phase relationship. If we are not careful, at some point this internal phase shift in conjunction with some of the "impurities" of our external components causes instability. The worst case instability is oscillation at the "parasitic" frequency, however, difficult tuning, noisy operation, et cetera are also symptoms.

Note that in the above example, the "frequency of operation" may not be the desired frequency, but an undesired (usually higher) frequency.

Small value resistors placed very close to the device terminals help prevent instability because they modify the gain/phase relationship of the device at the parasitic frequency (ies). Compared to the external impedances of the tuned circuits, the resistors are small enough that they have little effect. Compared to the tiny internal device impedances they have a more pronounced effect.

So the partial answer to your question: "Why is the resistor only a minor resistance at 7 MHz but high impedace at vhf?", is that the resistor *value* is the same at all frequencies, but its *effect* is different at different frequencies.

Note that the selection of resistor values was often a "cut-n-try" or "black magic" process. Nowadays, with modern computing power and accurate device models,all of this stuff can be predicted and the design process is more "pure." Not necessarily more fun tho...

73,

Wes Stewart N7WS

3325. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Alex D. Nicolson" <alexdan@intergate.bc.ca>
Message-ID: <f086gsgt78uist9jbsvd33ri9pphe1oq99@4ax.com>
Source record: 61227

You also might try and find a copy of H.M.Dowsett's excellent
"Handbook of Technical Instruction for Wireless Telegraphists".
My copy is the 4th Ed published, I think, in the early thirties by
Iliffe & Sons Ltd, London for "Wireless World".

In my experience we still used Marconi 1/4kw QG transmitters as
installed lifeboat equipment as late as the mid fifties, and it was
certainly an PMG exam item at the James Watt College in Greenock
around 1951.

Best

Alex Nicolson
Richmond BC Canada

On Fri, 21 Apr 2000 20:13:33 -0400, "Geoffrey G. Rochat"
<geoff@pkworks.com> wrote:

>You might want to consider looking into a rather eclectic organization
>known as The New England Wireless and Steam Museum,
>users.ids.net/~newsm/
>
>>Fritz Sonnichsen wrote:
>>>
>>> I am working with an engineering department here, and we are trying
>to
>>> develop, for the lab, a Marconi or spark sending unit for
>demonstration
>>> purposes. We have sucessfully built a coherer and transmitted high
>voltage
>>> sparks generated signals across a few feet. We would be interested in
>>> hearing from anyone who has either theoretical information or
>practical
>>> experience in building, early Marconi or spark sending units.
>>>
>>> Cheers
>>> Fritz (AA2OP)
>

3326. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8g68os.lk7.X@animas.frontier.net>
Source record: 61228

On Sun, 23 Apr 2000 03:13:50 GMT, Michael Black scribbled:
>
>But the last two CB sets I saw this way did not look like the final
>transists would be in good shape. The circuit boards were partially
>burned. And as I saw your post, I couldn't help but think that maybe
>someone tried to boost the power, and burned something that way.

Probably due to followup postings in rec.radio.amateur.equipment --
where CB'ers ask how to boost the power of their rigs and they'er
told to plug the power cable directly into 120VAC -- thereby
multiplying their power 10-fold in shifting from 12V. <g>

Jonesy W3DHJ

__
SK

--
Marvin L Jones | jonz | W3DHJ | OS/2
Gunnison, Colorado | @ | Jonesy | linux __
7,703' -- 2,345m | frontier.net | DM68mn SK

3327. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <8dv7ev05jb@news2.newsguy.com>
Source record: 61229

Don't forget, the gain of a transistor is inversely related to frequency.
That 20 ohms is going to mean a lot more where the gain is 2 than where it's
20.

--xpyttl
Bob Camp wrote in message ...
>The traditional VHF parasitic suppression gizmo is/was about a 10 to
>30 ohm resistor with three or four turns of number wire on the body of

3328. Odp: Wanted: "QRP Power"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Jarek Misiak <jmis@po.opole.pl>
Message-ID: <XnGM4.33085$hK2.634547@news.tpnet.pl>
Source record: 61230

Hello dear
I am also looking for "QRP POWER" but I dont now where can I buy this book
?
Can You send me AES (??) internet adress ?

73! Jarek sp6ojk

> This book is still in print. AES sells it for $12.00
>
> 73,
> Dean, K5DH
> Visit my amateur radio web site at http://www.qsl.net/k5dh
>

3329. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8dvcoi$5m6$1@uranium.btinternet.com>
Source record: 61231

A low value resistor in series with the control grid of a tube, in conjunction with grid input capacitance, reduces gain at higher frequencies and ensures absence of VHF or UHF parasitic oscillations. Such oscillations use circuit inter-component wiring as 1/2-wavelength tuned circuits.

The resistors damp down possible resonances. Used mainly as a precaution.

Examples - 33-ohm resistors in HF amplifiers. 3.3 K-ohm in audio frequency anplifiers. Doesn't matter if resistors have a little inductance as in metal or carbon film types.
--
Regards, Reg.
==========
Bill Meara <n2cqr@erols.com> wrote in message news:39032001.450303161@news.erols.com...
> I was reading through some of the old W1FB articles in QRP Classics.
> At one point he discusses the use of low value resistors in HF
> circuits to suppress possible vhf oscillations/parasitics. How does
> this work? Is is because the resistors have some inductance that
> affets the vhf? Does this mean that ordinary old carbon resistors
> wouldn't work in this application?
>
> Thanks, 73 Bill N2CQR

3330. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Dana H. Myers K6JQ" <dana@source.net>
Message-ID: <390339A6.5ECAD078@source.net>
Source record: 61232

Kludge wrote:
>
> On Sun, 23 Apr 2000 03:13:50 GMT, Michael Black scribbled:
> >
> >But the last two CB sets I saw this way did not look like the final
> >transists would be in good shape. The circuit boards were partially
> >burned. And as I saw your post, I couldn't help but think that maybe
> >someone tried to boost the power, and burned something that way.
>
> Probably due to followup postings in rec.radio.amateur.equipment --
> where CB'ers ask how to boost the power of their rigs and they'er
> told to plug the power cable directly into 120VAC -- thereby
> multiplying their power 10-fold in shifting from 12V. <g>

Po = V^2 / 2*Rl

So, 10x the voltage means 100x the power.

--
Dana K6JQ DoD #j
Dana@Source.Net

3331. ! sinclair/science of cambridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: David <david@aoharrow.freeserve.co.uk>
Message-ID: <8dvdoslfv5@newsg2.svr.pol.co.uk>
Source record: 61233

Hi,

I am trying to locate a science of cambridge (Later to become sinclair) MK14 computer system.

The computer was avaiable in home built kit for in the UK and from what i am led to believe, most examples were sold to amateur radio enthusiast, as at this time they were the only people experimenting with electonics in the home build environment. (Hence my reason for posting in this NG)

If you have one, or spares, or indeed and sinclair items ie computers, calculators, radios, watches etc, working or otherwise, that you would like to sell, please email me as i cannot regularly get access to newsgroups.

I would also possibly be interested in early home computers from the 1970s and 1980s.

Thank you in advance.

david@aoharrow.freeserve.co.uk

Bye

3332. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8dvf61$d1g$1@newcastle.cs.ubc.ca>
Source record: 61234

"Dana H. Myers K6JQ" <dana@source.net> writes:

>> Probably due to followup postings in rec.radio.amateur.equipment --
>> where CB'ers ask how to boost the power of their rigs and they'er
>> told to plug the power cable directly into 120VAC -- thereby
>> multiplying their power 10-fold in shifting from 12V. <g>

>So, 10x the voltage means 100x the power.

Or, in this particular case, 10X the voltage means 0X the RF power,
but some nice smoke.

Dave

3333. Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Alex Turner <aturner13@mindspring.com>
Message-ID: <8dvft7$r4u$1@slb0.atl.mindspring.net>
Source record: 61235

I would like to build a solid state amp in the 40-70 watt range. Does anyone have any experience with such and no of a good design.

73
Alex,N4BYJ

3334. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Dana H. Myers K6JQ" <dana@source.net>
Message-ID: <39034609.BE02B490@source.net>
Source record: 61236

Dave Martindale wrote:
>
> "Dana H. Myers K6JQ" <dana@source.net> writes:
>
> >> Probably due to followup postings in rec.radio.amateur.equipment --
> >> where CB'ers ask how to boost the power of their rigs and they'er
> >> told to plug the power cable directly into 120VAC -- thereby
> >> multiplying their power 10-fold in shifting from 12V. <g>
>
> >So, 10x the voltage means 100x the power.
>
> Or, in this particular case, 10X the voltage means 0X the RF power,
> but some nice smoke.
>
> Dave

Well, yeah. I was just speaking theoretically, of course.

:-)

--
Dana K6JQ DoD #j
Dana@Source.Net

3335. JFET winner: J310 (was Re: Your favorite FET?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <39034A5F.B258AB58@bellsouth.net>
Source record: 61237

I choose the J310.

I'm not sure the U310's metal case is necessary anywhere for HF, unless
you're pushing its power dissipation spec. I think I would avoid doing
that. For ultimate stability in an oscillator, the U310's temperature
would probably vary less.

If I were forced to use less current, I would use the 2N548x family.
The lower capacitance and higher cost of the 2N4416 are not necessary at
HF.

Wherever a MPF102 is specified, I think you can assume: "Any
small-signal low noise JFET. Trim as needed."
For a basic hobbyist like myself, any old JFET with appropriate specs
would
do fine.

I suppose I'll go look at the MOSFETs now.

"Ralph E. Carter" wrote:
>
> What is your favorite small-signal, low-noise FET
> for 3-30MHz?
> Not being an expert, and studying the tech sheets,
> and looking at applications on the internet and in
> the ARRL Handbooks, here is what I've found:
>
> MPF102 This is inexpensive, and would probably work
> fine anywhere in an HF preamp or receiver.
> Its published tolerances are wide, though.
> Its gfs is very low.
>
> J310 This looks super-primo to me. If the tech data
> can be believed. The cost is still OK, but there
> are fewer sources. Gfs is high. Using these in
> the first stage, with grounded gate, seems popular.
> Why? (U310 is in a metal can.) There is a graph
> of its intermod performance in the tech data I have.
> It is drastically better than the similar graphs
> in the files for other JFETs I've seen (I can't
> remember which.) This suggests that it could tolerate
> large signals and would be easier to use in that
> first preamp stage.
> When I've run models of this in SPICE, its gain has
> tended to be low. I think lower gain with greater
> dynamic range would be easier to work with.

>
> 40673 This is an extremely good dual gate mosfet that
> NTE222 would be fun to play with. It cost ten times
> as much. If one needed this function, couldn't it
> be done almost as well with totem-poled JFETs?
>
> 2N4416 I see this is very popular. I don't know why.
>
> 2N5484 These aren't mentioned as often. I don't know why.
> 2N5485 The specs look very good to me.
> 2N5486
> 2N5670
> 2N5668
> 2N5669
>
> Studying this issue is difficult, because I'm not sure which
> specs to favor.
> Any of these would work very well. I like the J310 best.
> Charles Kitchin, N1TEV, seems to know what he's doing. In his
> circuits I've seen, he has used 2N4416, J310, MPF102, and the
> BJT 2N2222, all in similar applications (preamps and simple
> receivers). These four devices are quite different.

3336. website !

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Andrew Rea <aprea@cableinet.co.uk>
Message-ID: <gZIM4.7157$VR6.685530@news3.cableinet.net>
Source record: 61238
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.radio.amateur.space,uk.radio.amateur

take a look at http://jove.prohosting.com/~andyrea

there's some radio links n' stuff

--
Andy Rea

aprea@blueyonder.co.uk

Visit my web site http://jove.prohosting.com/~andyrea

3337. Re: HP Plotter Printing on Copper Boards

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8dvn8lpli1@news6.svr.pol.co.uk>
Source record: 61239

The best plotters for this task are the Roland flatbed type I have a Sketchmate and an 880 and I use Steadler 318F black pens. In windows95/98 reduce the plotting speed a low as the 7475 emulator will go for best results. 73 Robin G3LBA

"

> >
> >
> >
>

3338. Mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8dvn2q$5e3$1@lola.ctv.es>
Source record: 61240
Cross-posted to: alt.ham-radio.mods,free.uk.amateur-radio,rec.radio.amateur.homebrew,uk.radio.amateur

Have a look in the Ham Mods section for some mods for the following

http://personales.jet.es/colinlowe/index.htm

You will find mods for the following:

Yeasu FT847
Kenwood TM732 and TH48
Standard C510
Motorola GP300, GM300 and McMicro
Icom IC2800H

73 de Colin

3339. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: goldreged@aol.comJUNKBLOK
Message-ID: <20000423172650.20583.00003195@ng-fy1.aol.com>
Source record: 61241
Body handling: HTML body converted to readable text

<>

If your looking for an HF amp,
http://www.rfparts.com
has a great set of plans in a booklet that reminds one of the old Heathkit
construction projects.

http://www.systems.caltech.edu/EE/Faculty/rutledge/poweramp.html
is an alternative to usual thinking in production of high power amps....
Ed G.
KB1DQX
(Please Remove "JUNKBLOK" to E-mail.
Unless it's a Flame.)

3340. TAP 2.0 Utility Page Update

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <39036F86.4DA6E14@rsg.org>
Source record: 61242

For the user's of TAP 2.0 (Triode Amplifier Program for Grounded
Grid
applications) I've updated the utility page with a few additional
hints on
generating your own *.tub file for triodes not currently in the
library.
A visual aid of the 8877 Plate/Grid characteristics has been added
showing
the operating points used in generating the 8877.tub file.

Any new files added by user's to the database will be credited to
the submitter.

See:
http://www.mbn.net/kd9jq/hamradio/tap_mak.html

Browse the rest of my site for circuits, mods, component, vendor,
or sw links.
mailto:kd9jq@rsg.org if there's any technical questions relating
to the programs
or specific design questions on circuits you are building.

And the Prgrams are Free!

Site supports MIME Type application/x-midi background music.
(Crescendo)

73 Chuck KD9JQ
http://www.mbn.net/kd9jq/hamradio

3341. ICOM 32E

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: tony barber <tony.barber@virgin.net>
Message-ID: <39037EC2.C92@virgin.net>
Source record: 61243

operating manual req, Thanks, Tony

3342. Yaesu FT707

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-23 00:00:00 UTC
From: tony barber <tony.barber@virgin.net>
Message-ID: <39037EEA.7CC1@virgin.net>
Source record: 61244

operating manual req, Thanks, Tony.

3343. FA over 100 pcs microwave stuff klystrons pin mods etc..

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Pat Jankowiak <vaxhackery@worldnet.att.net>
Message-ID: <39038FA5.D99317FF@worldnet.att.net>
Source record: 61148

This is the entire collection of klystrons, PIN modulators,
circulators, frequency meters, and other cool microwave parts and
pieces from an estate.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=315838787

3344. Re: Odp: Wanted: "QRP Power"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: knox_k_NOBS@nemaine.com
Message-ID: <39039b06.1053534@news.nemaine.com>
Source record: 61149

On Sun, 23 Apr 2000 17:27:19 GMT, "Jarek Misiak" <jmis@po.opole.pl>
wrote:

>Hello dear
> I am also looking for "QRP POWER" but I dont now where can I buy this book
>?
>Can You send me AES (??) internet adress ?
>
>73! Jarek sp6ojk
>
>
http://www.aesham.com/

3345. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <39038247.546448103@news.online.no>
Source record: 61150

On Sun, 23 Apr 2000 15:00:07 GMT, "Bob Camp" <bob@cq.nu> wrote:

>The traditional VHF parasitic suppression gizmo is/was about a 10 to
>30 ohm resistor with three or four turns of number wire on the body of
>the resistor. At the normal operating frequency the resistor was
>shorted out by the coil. At VHF the coil looked like an open circuit
>and the resistor came in to play.
>
>Even a small resistance in series with the output tank would de-Q it
>enough to drop the gain at VHF. Once you got rid of the gain you got
>rid of the parasitic oscillation.
>
I used these resistors for MOSFETs and valves, since early 60's to
cure spurious effects of unwanted coupling between input and output of
the stage, 47 ohm in series with grid and anode for 6AK5 seems to
work, 47-100 ohm for Mosfets
don't think it was W1ICP or W1CER who mentioned this first

>These days you might see ferrite beads used to do more or less the
>same sort of thing.

it might have the similar effect of a resistor with small coil in
parallell, low value at low frequency, increasing at higher, but the
device is certainly not purely resistive, paralell capacitance seems
to be a problem - not series inductance

73 JM
LA8AK

3346. Re: JFET winner: J310 (was Re: Your favorite FET?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3903873c.547716608@news.online.no>
Source record: 61151

On Sun, 23 Apr 2000 15:09:19 -0400, "Ralph E. Carter"
<carterr@bellsouth.net> wrote:

>
>Wherever a MPF102 is specified, I think you can assume: "Any
>small-signal low noise JFET. Trim as needed."
>For a basic hobbyist like myself, any old JFET with appropriate specs
>would do fine.
>
seems that MPF102 is very loosely specified, gm= 2 - 7.5mmho, compared
to MPF105 (2N5459) which has 2-4.5mmho, and J310 with 8-20mmho

could it be that if a device is out of specifications, it is sold as
MPF102?

73 jan-martin
LA8AK

3347. Re: WTB: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2304002258390001@usrh-5-109.hip.cam.org>
Source record: 61152

In article <3902E21E.19C9@nosnot.com>, nosnot@nosnot.com wrote:

> Michael Black wrote:
> >
> > Don Lancaster, his website is http://www.tinaja.com mentioned John T. Frye
> > a few months back in one of the sci.electronics.* newsgroups in a thread
> > about the hobby electronic magazines (there have been a few in recent
months.
> > Unless he was confusing Frye with someone else, he seemed to have some
> > insider information that he only hinted at; Don of course was a
> > regular contributor to Popular Electronics 35 or so years ago...
>
> Thanks for the chronology of PE... it all comes back to me now... I
> guess that's why I liked Electronics Illustrated more that PE---it was
> so much less stuffy! Besides that, EI graphics were so much better and
> the projects were more enjoyable and accessible to mainstream
> builders---and not to forget UNCLE TOM'S CORNER! Odd that PE is
> remembered so well and EI has been seemingly forgotten although if the
> subject is brought up in informal meetings EI never fails to bring back
> fond memories.
>
EI was the first electronic magazine I ever saw or bought. It was the
Jan 1971 issue. I already had an interest in Ham Radio, and had worked
my way through the electronic/electric books at the children's library,but
I didn't know there were such things as electronic magazines, and I sure
can't remember why I noticed them that particular time.

The other electronic magazines must have been on the shelf next to EI,
but I also can't remember why I chose EI over the others back then.

The non-technical stuff like Uncle Tom's Corner, and Wayne Green's column,
were certainly useful for the first few months, because I sure
know much about electronics at that point, and they gave me something to
read and to continue to get the magazine.

About a week later, I got my first issue of Popular Electronics, and
then Elementary Electronics, and I received my first issue of QST in
April of that year, so I must have moved forward fairly rapidly.

Electronics Illustrated died off at the end of 1971, with an editorial
saying how it was too difficult to keep going, and it would be merged
with Mechanix Illustrated (published by the same company) and how
it would be all for the better. There was a very small "Electronics
Illustrated" section in the following issue of MI, and it lasted for
a few issues, complete with "Including Electronics Illustrated" on
the cover, but it hardly compared with the standalone magazine, and

sure didn't last very long.

I suspect that's one reason EI isn't remembered as much as PE. Popular Electronics lasted longer, and just maybe EI started after PE.

I was able to get a good collection of back issues of PE and EI from the decade before I first bought an issue, in the next year or so. That decade seemed so long in the past at the time, but nowadays a decade seems so much shorter.

I'd have to say that I liked PE better. It seemed to carry more advanced material, and I suppose that's one reason that EI had wiring diagrams. But if you look over a decade of a magazine, there is an awful lot of repetition. "We haven't run a GDO article for a while, so we'd better buy one now", or one of the regular authors wanted some money so they sold a project that was just a reworking of one they wrote before. But there were stand out articles in EI, as there were in PE, construction articles that showed something new for a change.

I look at the magazines now, be they hobby electronic or ham, and they don't carry the same feel that they had back when I first discovered them. I'd like to think that some of it is because I discovered them at the age of 11, and they were exciting because it all seemed so new. I'd like to think that I find today's magazines less attractive because they've been a part of my life for almost thirty years, that I am much older, and that the repetitiion inherent to such magazines have just worn me down. I'd like to think that the hobby electronic and ham magazines can be as appealing to the newcomer, especially the young, as they appealed to me back in 1971.

Michael VE2BVW

3348. Re: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2304002311150001@usrh-5-109.hip.cam.org>
Source record: 61153

In article <3902F274.469EB13C@dialpoint.net>, Ralph Mowery
<rmowery@dialpoint.net> wrote:

> In the magazine every month there was a story about two teenage boys.
> Not sure if the stories ended or not as I quit the zine about 25 years
> ago. They were in high school when I started reading around 1961 and
> had gotten to be freshmen in college about 15 years later..One story
> comes to mind where they went to buy a car and did things like using a
> microphone to listen to a bad wheel bearing. Another time a FBI agent
> needed them to erase a tape that a spy had. They built a device in a
> attache case out of a big coil of wire and a dc to ac converter and as
> they were getting on a train they rubbed that against the case the spy
> was carring. Their first week in college got them in trouble with the
> dean. They put a speaker in a mail box and ran some fine wires to the
> dorm room . They used it to talk to people. One was the dean of the
> college.
>
> They did not use the electronics to get into trouble , but gave some
> ideas on what could be done with simple around the home devices in many
> cases. BTW they were also suspose to be ham operators.
>
Well, they didn't take fifteen years to get to college. The stories stopped
appearing by the mid-1960's, and they had made it to college.

As I said in the "WTB" thread, the stories were a chance to educate
without being really technical. There was one episode when they were
in college, and they were asked by the college radio station to track
down a "bootleg" station interfering with it. The college station
transmitted using the the power line as the distribution system, so
before the adventure started, we were treated to an introduction to
the way it was done. The adventure wasn't first, with the electronics
secondary (as it was in say the Hardy Boys adventure where they suddenly
were hams), but the adventure was a way to describe something technical.

In many of the stories, people would come to them with problems because
it had become known that they were "electronic experts".

Other times, they were minding their own business,and got into a situation
where they used electronics to save themselves. The one where their car
was overtuned and they used the electrical system to send morse code
using sparks, or the one where they were locked into the back of
a gas station by criminals and they used their knowledge of telephones
to make a makeshift telephone from a speaker and transformer out
of a tv set (and shorting the phone line rapidly to dial) were
examples of that.

The third category might fit into the area of pranks, like the time
they learned about snow making, and tried it and then couldn't
stop the snow, or the time when they set up a fun house.

The best ones semed to be the ones where John T. Frye ahd read something
in a technical journal, like about magnetometers, and used that
as a basis of the story, because he was bringing fairly new ideas
to the hobby magazine.

Michael VE2BVW

>
> AMDX wrote:
> >
> > Tell me about the Carl and Jerry episodes.
> > Inquiring (younger) minds want to know.
> >
> > --
> > Mike Knowlton
> > Panama City Fl.

3349. Re: JFET winner: J310 (was Re: Your favorite FET?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2304002341590001@usrh-5-109.hip.cam.org>
Source record: 61154

In article <3903873c.547716608@news.online.no>, LA8AK@Online.NO wrote:

> On Sun, 23 Apr 2000 15:09:19 -0400, "Ralph E. Carter"
> <carterr@bellsouth.net> wrote:
>
>
> > >Wherever a MPF102 is specified, I think you can assume: "Any
> > >small-signal low noise JFET. Trim as needed."
> > >For a basic hobbyist like myself, any old JFET with appropriate specs
> > >would do fine.
> > >
> > seems that MPF102 is very loosely specified, gm= 2 - 7.5mmho, compared
> > to MPF105 (2N5459) which has 2-4.5mmho, and J310 with 8-20mmho
> >
> > could it be that if a device is out of specifications, it is sold as
> > MPF102?
> >
> > 73 jan-martin
> > LA8AK

I thought there were warnings 35 to 30 years ago about the wide spread
of the specs on the MPF102. I recall a letter to Ham Radio that pointed
this out, and my recollection is that it pointed out better choices
from Motorola, almost as if they had sorted devices out into better
specified parts.

Of course, another way to look at the MPF102 is that the number is used
as a generic descriptor, like the 1N34, 1N914 and 2N706 in the old days,
and more recently the 1N4148, 2N2222 and 2N3904. I imagine there were
similar common devices in Europe. Someone chose these in the first
place, and others used them elsewhere because they were already in
public view. After a while, you could buy these devices everywhere,
reinforcing their use in future projects. But after a certain point,
the part numbers became so common that they were a description of
what was needed, ie a general purpose part with a certain range of
specs.

Every time I see "1N914" or 1N4148, I just pull a small signal diode
off a scrap board, unless there is something really special about the
circuit it's used in. Likewise, in most cases for common silicon
transistors, I know I can pull a similar transistor off a junk board.
Of course, I know enough to be able to look at the circuit and
see if there will be a problem, such as frequency range or some extreme,
so that I might be safer using a more carefully considered replacement.

And once a part becomes very common, many will demand it rather than use it to define a type of part. So I suppose some surplus distributors might start marking or remarking generic parts with "MPF102" or 2N2222 regardless of what they were supposed to be originally, simply because they know that those specific parts numbers are commonly bought. These companies are selling generic parts, so why not put a generic part number on them?

Michael VE2BVW

3350. Tuner Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Don <kd6hq@sonic.net>
Message-ID: <9%PM4.70$Q%6.13644@typhoon.sonic.net>
Source record: 61155

I am looking for a matched pair of roller inductors. At least 3kv & 38 uh
or better.

73's
Don mailto:kd6hq@sonic.net

<kd6hq@sonic.net>

3351. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <HDSM4.2500$Hc7.77208@news.corecomm.net>
Source record: 61156

I meant the yellow tape cost $2.50 not the pink one. Sorry.

73, AL

3352. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8e1g75$n824@icet.net.nih.gov>
Source record: 61157

I will pass this message along to the webmaster.

Kludge (X@Y.Z.net) wrote:
: On 21 Apr 2000 22:40:49 GMT, Andrew R Mitz scribbled:
:
: >There is a CK722 web site;
: >http://www.geocities.com/ck722transistor/history/rca.htm
: >I also am interested in super regen circuits. Drop
: >me an email at arm@gnode.org
: >-- Andy
:
: re: http://www.geocities.com/ck722transistor/
: I was looking at this site the other day following a previous
: post of yours.
: How do you expect the search engine to find and catalog this web
: site with each and every page totally graphical (that is: textless)
: and with no informative meta-tags?
:
: It is a Very Good presentation, tho'.
:
: Jonesy W3DHJ
: Who built a CK722(3) + CK768 Superhet AM rcvr somewhere around 1957-58
:
: --
: Marvin L Jones | jonz | W3DHJ | OS/2
: Gunnison, Colorado | @ | Jonesy | linux __
: 7,703' -- 2,345m | frontier.net | DM68mn SK

--

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
Laboratory of Systems Neuroscience
Section on Neurophysiology
National Institute of Mental Health
Bethesda, Maryland 20892-4401

3353. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8e1gic$n825@icet.net.nih.gov>
Source record: 61158

Slightly off topic: gass state amp

I would like to build, or even just buy a home brew vacuum
tube HF amplifier. Specs:
input: 5w
output: 30 to 100 w
freq: 3.5 to 30 MHz, or any ham band therein
type: linear
Output needs to be clean enough for current day ham use

Would consider buying or building a solid state amp
as a second choice.

Thanks.

arm@gnode.org

Thomas C. Sefranek (tcs@cmcorp.com) wrote:
:
:
: Alex Turner wrote:
:
: > I would like to build a solid state amp in the 40-70 watt range. Does anyone
: > have any experience with such and no of a good design.
: >
: > 73
: > Alex,N4BYJ
:
: Try mentioning what frequency (s) you want to amplify, the power source, the
: drive level.
:
: --
: *
: | __O Thomas C. Sefranek tcs@cmcorp.com
: |_-\<,_ Amateur Radio Operator: WA1RHP
: (*)/ (*) Bicycle mobile on 145.41, 448.625 MHz
:
: http://hamradio.cmcorp.com/inventory/Inventory.html
: http://www.harvardrepeater.org
:
:

--

3354. NE601 Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Bis_Wichy@webtv.net
Message-ID: <9179-390461AE-15@storefull-168.iap.bryant.webtv.net>
Source record: 61159

This was probably covered a million times on this newsgroup but I have not been able to find it. I am looking for a spec sheet on this RF chip. I want to modify the mixer section on my Ten Tec Century 21.

Went to the Signetics web site but they don't have any data sheets there. I was also told that Radio Electronics had an article by Joe Carr back in 1997.

Any help would be appreciated. -B

3355. Re: NE601 Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e1rn9$p9v$1@nnrp1.deja.com>
Source record: 61160

In article <9179-390461AE-15@storefull-168.iap.bryant.webtv.net>,
Bis_Wichy@webtv.net (=?ISO-8859-1?Q?-_WD=D8HCO_-_Dallas_TX_-?=) wrote:
> This was probably covered a million times on this newsgroup but I have
> not been able to find it. I am looking for a spec sheet on this RF
chip.
> I want to modify the mixer section on my Ten Tec Century 21.
>
> Went to the Signetics web site but they don't have any data sheets
> there. I was also told that Radio Electronics had an article by Joe
Carr
> back in 1997.
>
> Any help would be appreciated. -B
>
>

Why don't you use a NE612? it is modern and its datasheet is easily
found, for instance, at this huge URL:
http://www.partminerclient.com/pm_client/results_frameset.asp?url=http%3
A%2F%2Fwwwimg.ihserc.com%2Fcgi-bin%2Fimgconv%3FSESS=%26prod=partminer%26
psi=%31%33%38%33%34%34%39%32%26docid=PHIN%26maxpage=%30%30%30%37%26ipn=%
26PDF.x=%31%26PAGENUM=MAX%26STARTPAGE=%31%26ie=.pdf
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3356. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <390463CE.F683C6A6@midwestmicro-tek.com>
Source record: 61161

Here it is.

http://hem.passagen.se/sm0vpo/tx/5watttx.htm

Steve Ratzlaff wrote:

> Hi Rick,
> Forgot to ask, what's the URL for the webpage with the simple QRP
> schematic?
> Steve
>
> Rick Haub wrote:
> >
> > I found a great, simple QRP schematic on a web site. It's supposed to
> > output about 5 watts and used a 7400 as the driver into the final
> > transistor. Unfortunately the notes only say that "any rf transistor
> > will do". I'm pretty new to hamming and I don't know what would be a
> > good choice. The author of the web site has no e-mail link so I can't
> > ask him. I get a lot of my stuff from (silver mica caps and tubes)
> > hppt://alltronics.com , they have a lot of transitors and I'm sure at
> > least one of them will do. Any suggestions?
> >
> > Thanks,
> >
> > Rick KC0GIX

3357. Only for discussion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e1ssi$qk7$1@nnrp1.deja.com>
Source record: 61162

Suppose a rf wave entering two different buffers. The first buffer output is AM modulated with the signal S1 and the other AM modulated with the signal S2.
Now, both modulated signals are half-wave rectified, keeping the positive semi-cycles of the first one and the negative semi-cycles of the second. Now, if we sum the two rectified waves, we get a rf signal with a positive envelope S1 and a negative envelope S2.
Let's radiate this rf signal.
Affirmative: "In the receiver end, if we use a diode detector with one polarity, we will detect the modulation S1 and with the other polarity we will detect S2".
The questions are:

1 - Is the above affirmative true, that is, can we transmit 2 (two) different signals S1 and S2 simultaneously using this AM modulation scheme?

2 - (no matter if the answer is positive or negative) Why?

3 - Will this method work for conducted signal, that is, not radiated but through wires?

--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3358. WTB/trade SX-28

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: DETROIT47 <detroit47@mediaone.net>
Message-ID: <390479FF.1CE8E106@mediaone.net>
Source record: 61163

Hi all
I'm still looking for a SX-28 to buy or trade .I will be at
Dayton.Please respond direct.
73 John N8QPC

3359. Help with identifying toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Fred <fdecker@compuserve.com>
Message-ID: <8e2018$4f2$1@ssauraaa-i-1.production.compuserve.com>
Source record: 61164

Can anybody help me figure out what kind of toroids I have?

I have tan rounded edge enameled ones: Y28 5503-W4
yellowish rounded edge enameled ones:622 55041-W4 0
grey rounded enameled A2C-55037-A2 with 0 +4 or -4 as the last digit.

Also, the last ones are sharp edged with no coating, but red paint on one
side.

--
Fred
N4IXL
ICQ:10254840
http://members.aol.com/fdecker

3360. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <39048917.6E38CC51@eznec.com>
Source record: 61165

A quick search with HotBot shows that SM0VPO also has a web page at http://sm0vpo.8m.com. On the main page is a link you can click to ask questions. I'd give it a try if I were you.

Roy Lewallen, W7EL

Rick Haub wrote:
>
> Here it is.
>
> http://hem.passagen.se/sm0vpo/tx/5watttx.htm
>
> Steve Ratzlaff wrote:

3361. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <390497D1.5707@ixpres.com>
Source record: 61166

>
> Dick's posting reminds me...long ago I had a book titled "The Boy
> Electrician." It had a wealth of interesting projects in it of the
> sort that boys--and others--tinkered with in the early 1900's, but
> somewhere along the way, I lost it. Darn. However, in searching some
> used-book web sites, I discovered that it has apparently been
> reprinted, and you can probably find a copy at a reasonable price. It
> would be a nice addition to a "spark museum" I think, even if you
> don't manage an original edition.
>
> Cheers,
> Tom

Tom OM,

The Boy Electrician! Brings back fond memories. I found a copy in
our small town library when I was 11 years old, and I've never been the
same since, HI. I actually built a spark gap transmitter using a Ford
Model A coil, and Vee antenna, in 1952. It ripped up every radio (and
the very few TV sets) in the neighborhood. It thrilled me (after all,
that meant I was really TRANSMITTING). I have never seen a copy since.
Maybe now I can find one.

TNX and 73,

Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

3362. Re: Wanted:KK7B R2 board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <39049C96.7B82@ixpres.com>
Source record: 61167

Ham wrote:
>
> Anyone have a KK7B R2 receiver board that's collecting dust ?
> (Built or unbuilt kit.) I have a sudden impulsive urge to play around
> with one.
> Please state condition and asking price.
>
> Hugh VA3TO
> Please e-mail va3to@rac.ca

Hugh OM,

I built one and I love it. You will too. You can get a bare board
from Kanga US; Bill Kelsey.

73 and GL,

Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

3363. Re: Wanted:KK7B R2 board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <39049E0E.B53A724@eznec.com>
Source record: 61168

Don W6JL wrote:
>
> Hugh OM,
>
> I built one and I love it. You will too. You can get a bare board
> from Kanga US; Bill Kelsey.
>
> 73 and GL,
>
> Don, W6JL

If you happen to be coming to Dayton next month, you can find Kanga US at booth 514. Bill and I have shared a booth for years.

Roy Lewallen, W7EL

3364. Re: Only for discussion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8e271b$5ah$1@plutonium.btinternet.com>
Source record: 61169

It won't work. Just imagine what happens in the demodulator if one channel is unmodulated.

What happens is that the pair of audio waveforms modulate each other. Better way is to allocate the single transmission path to each of the audio channels in turn. It's called Time Division Multiplex.

3365. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: troglodite@aol.com
Message-ID: <20000424153432.19383.00003870@ng-md1.aol.com>
Source record: 61170

> The Boy Electrician! Brings back fond memories. I found a copy in
>our small town library when I was 11 years old, and I've never been the
>same since, HI. I actually built a spark gap transmitter using a Ford
>Model A coil, and Vee antenna, in 1952. It ripped up every radio (and
>the very few TV sets) in the neighborhood. It thrilled me (after all,
>that meant I was really TRANSMITTING). I have never seen a copy since.
>Maybe now I can find one.

I know what you mean about that book. It seemed like I had it perpetually checked out of the library. I built the telephone system described in the book in about 1949. Also built the Tesla coil with the twin antennae, and a few other projects.

I believe all the Alfred P. Morgan books have been reproduced, including "The Boy Electrician." Check Amazon. I know I've seen them at hamfests too.

Doug Moore KB9TMY (Formerly K6HWY)

3366. micro ATV transmitter: Ebay auction

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: atvman@my-deja.com
Message-ID: <8e29qa$8fb$1@nnrp1.deja.com>
Source record: 61171

Check out the micro atv transmitter on ebay (70cm). Incredible device,
even better is the price!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316759041

Sent via Deja.com http://www.deja.com/
Before you buy.

3367. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Alex Turner <aturner13@mindspring.com>
Message-ID: <8e2d94tvd1@slb6.atl.mindspring.net>
Source record: 61172

Sorry, left out some important data. would like to use on 80 - 10 and drive available is milliwatts to 5 watts. Want to use on SSB and PSK31.

Alex,N4BYJ

3368. Sex

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8e2dg5dn1@lola.ctv.es>
Source record: 61173
Cross-posted to:
alt.ham-radio,alt.ham-radio.mods,free.uk.amateur-radio,rec.ham-radio,rec.radio.amateur.homebrew,uk.radio.amateur

http://personales.jet.es/colinlowe/index.htm

3369. Mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8e2d9u$9g$1@lola.ctv.es>
Source record: 61174
Cross-posted to:
alt.ham-radio,alt.ham-radio.mods,free.uk.amateur-radio,rec.ham-radio,rec.radio.amateur.homebrew,uk.radio.amateur

http://personales.jet.es/colinlowe/index.htm

3370. Re: NE601 Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3904b8ee.625987038@news.online.no>
Source record: 61175

On Mon, 24 Apr 2000 16:11:37 GMT, py1ll@my-deja.com wrote:

>
>Why don't you use a NE612? it is modern and its datasheet is easily
>found, for instance, at this huge URL:
>http://www.partminerclient.com/pm_client/results_frameset.asp?url=http%3
>A%2F%2Fwwwimg.ihserc.com%2Fcgi-bin%2Fimgconv%3FSESS=%26prod=partminer%26
>psi=%31%33%38%33%34%34%39%32%26docid=PHIN%26maxpage=%30%30%30%37%26ipn=%
>26PDF.x=%31%26PAGENUM=MAX%26STARTPAGE=%31%26ie=.pdf
>--
>Greetings,
>
>Luiz - PY1LL
>
NE612 is a low-cost version of NE602, probably not particularly
inexpensive for amateurs?

3371. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3904b98b.626143648@news.online.no>
Source record: 61176

On 24 Apr 2000 13:01:00 GMT, arm@helix.nih.gov (Andrew R Mitz) wrote:

>
>Slightly off topic: gass state amp
>
>I would like to build, or even just buy a home brew vacuum
>tube HF amplifier. Specs:
>input: 5w
>output: 30 to 100 w
>freq: 3.5 to 30 MHz, or any ham band therein
>type: linear
>Output needs to be clean enough for current day ham use
>
>Would consider buying or building a solid state amp
>as a second choice.
>
and -48v SUPPLY VOLTAGE ?

3372. Re: 1959-1961 Pop 'Tronics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Fuzzy or Shirley Duenkel <fuzzy@duenkel.com>
Message-ID: <Ga3N4.3034$5b3.847057@homer.alpha.net>
Source record: 61177

When the TV show McGiver first started, I thought it was a great departure from the shoot 'em up shows where guns and fist fights were the way to solve problems. Finally a show promoting using your brain (and science) instead of brawn! Unfortunately, as the show dragged on it just ended up into very predictable fist fights anyway.

Fuzzy

3373. ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Jay Moyer <jmoyer43@earthlink.net>
Message-ID: <3904A3DA.C9BBDA6E@earthlink.net>
Source record: 61178

Are other people having problems bringing up the arrl website. Is you
browser telling you that the www.arrl.org doesnt have a DNS entry.

I just wanted to know if it was my service provider or if the site
really was down.

Jay Moyer
jmoyer43@earthlink.net

3374. Re: Solid State Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <YQ3N4.7440$sB3.5380@news.indigo.ie>
Source record: 61179

>
>Slightly off topic: gass state amp
>
>I would like to build, or even just buy a home brew vacuum
>tube HF amplifier. Specs:
>input: 5w
>output: 30 to 100 w <snip>

http://www.qsl.net/ei9gq/amp.html

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3375. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: HELIO SAKAYA <enatec@worldnet.att.net>
Message-ID: <3904F7FE.973E84E4@worldnet.att.net>
Source record: 61180

Many thanks to the people that wrote back. I was moving my office this
past week-end, and my computer was off-line for a few days. I'll be in
touch with you guys that so kindly offered to exchange information on
those great old circuits. It's true that modern semiconductors (Mosfets
and the like) will perform better than those vintage devices, but wasn't
it a thrill to push a CK722 to oscilate at 1Mhz in those AM broadcast
transmitters? Weren't you mesmerized by a SB-103 pulling in 10M CQ's at
a time that junction transistors struggled to reach 5Mhz? Well, I was
and I guess I'm trying to go back to those worry free times riding on
those old regenerative circuits.
Thanks again.
73 de Helio KE4KKS

Andrew R Mitz wrote:
>
> I will pass this message along to the webmaster.
>
> Kludge (X@Y.Z.net) wrote:
> : On 21 Apr 2000 22:40:49 GMT, Andrew R Mitz scribbled:
> :
> : >There is a CK722 web site;
> : >http://www.geocities.com/ck722transistor/history/rca.htm
> : >I also am interested in super regen circuits. Drop
> : >me an email at arm@gnode.org
> : >-- Andy
> :
> : re: http://www.geocities.com/ck722transistor/
> : I was looking at this site the other day following a previous
> : post of yours.
> : How do you expect the search engine to find and catalog this web
> : site with each and every page totally graphical (that is: textless)
> : and with no informative meta-tags?
> :
> : It is a Very Good presentation, tho'.
> :
> : Jonesy W3DHJ
> : Who built a CK722(3) + CK768 Superhet AM rcvr somewhere around 1957-58
> :
> : --
> : Marvin L Jones | jonz | W3DHJ | OS/2
> : Gunnison, Colorado | @ | Jonesy | linux __
> : 7,703' -- 2,345m | frontier.net | DM68mn SK
>
> --

>
> Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
> Laboratory of Systems Neuroscience
> Section on Neurophysiology
> National Institute of Mental Health
> Bethesda, Maryland 20892-4401

3376. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <3904D21D.FD90AE71@ix.netcom.com>
Source record: 61181

Jay Moyer wrote:

> Are other people having problems bringing up the arrl website. Is you
> browser telling you that the www.arrl.org doesnt have a DNS entry.
>
> I just wanted to know if it was my service provider or if the site
> really was down.
>
> Jay Moyer
> jmoyer43@earthlink.net

==========
Been down all day here in San Diego, Jay

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

3377. Re: Help with identifying toroids

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Bill Durspek <BILLJD@mcleodusa.net>
Message-ID: <3904FD19.6C82@mcleodusa.net>
Source record: 61182

Fred wrote:
>
> Can anybody help me figure out what kind of toroids I have?
>
> I have tan rounded edge enameled ones: Y28 5503-W4
===You may be missing a digit on this one-5503-?
> yellowish rounded edge enameled ones:622 55041-W4 0
=== u=60 Molypermalloy powder core--by Magnetics Inc--low freq,
Al=32(Mh/1000turns) W4 is stabilized -55 to +85C
> grey rounded enameled A2C-55037-A2 with 0 +4 or -4 as the last digit.
=== u=200 Al=105, same lf mud in core, A2 means unstabilized temp-wise

73, Bill W0BVR

3378. Re: ! sinclair/science of cambridge

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Jim Adney <jadney@vwtype3.org>
Message-ID: <leb7gsos9nbc62ni5r86ierpf60n3brvsp@4ax.com>
Source record: 61183

"David" <david@aoharrow.freeserve.co.uk> wrote:

>Hi,
>
>I am trying to locate a science of cambridge (Later to become sinclair) MK14
>computer system.

Wasn't Commodore part of the same group?

-

Jim Adney jadney@vwtype3.org
Madison,Wisconsin USA

3379. Re: JFET winner: J310 (was Re: Your favorite FET?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: rick@vax.area.com
Message-ID: <8e322hieg1@vax.area.com>
Source record: 61184

In article <39050105.35A5C43E@webaxs.net>,
Russ.Shaw <russell@webaxs.net> wrote:
>Usually, there is a 'magic' source resistance one can use that makes
>the transconductance stable, over all production variations.

No there isn't. The stability just continues to improve as
it increases. You typically have to waste 3 to 5 volts across
the source bias resistor to get a design that holds the bias
within a 2:1 range for all possible variations in the FET
parameters, since the specs are (in 99% of the cases) loose as
a goose.

That is why the BF904 is such a breakthru. It requires NO source
resistor, yet the bias is stable to something like 20%. It has
a little bias controller built in. Clever!

Rick Karlquist N6RK

3380. Re: Wanted:KK7B R2 board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: Jim Pennell <spam@xspam.com>
Message-ID: <8e36iq$38h$1@slb1.atl.mindspring.net>
Source record: 61185

Last time I checked, the Kanga website indicated the KK7B R2 kit is not avaliable.

Apparently, they are going to replace it with the "R2 PRO" which is not ready yet, but close enough that they've stopped carrying the original R2 kit.

http://www.bright.net/~kanga/kanga/

Jim
N6BIU

jpennell@ix.netcom.com

3381. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-24 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <909agske35qo0t78728eime3b7seoip4jh@4ax.com>
Source record: 61186

On Mon, 24 Apr 2000 22:13:23 GMT, Jay Moyer <jmoyer43@earthlink.net>
wrote:

>Are other people having problems bringing up the arrl website. Is you
>browser telling you that the www.arrl.org doesnt have a DNS entry.
>
>I just wanted to know if it was my service provider or if the site
>really was down.
>
>Jay Moyer
>jmoyer43@earthlink.net

Just clicked on the link to ARRL at 9:50pm PDT4-24-2000. The ARRL site
has been Hacked. You get a site whose wording I will not repeat here.

Gary

3382. Re: Mods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: You are a wanker <wally@wally.com>
Message-ID: <ifeN4.8235$E4.16421@newsfeeds.bigpond.com>
Source record: 61045
Cross-posted to:
alt.ham-radio,alt.ham-radio.mods,free.uk.amateur-radio,rec.ham-radio,rec.radio.amateur.homebrew,uk.radio.amateur

Look you have already posted this same damn URL at least 8 times in one day
under heaps of different headings. Piss off spammer. i am not even going
to bother looking at your most likely shithouse site.

Colin Lowe <colinlowe@jet.es> wrote in message
news:8e2d9u$9g$1@lola.ctv.es...
> http://personales.jet.es/colinlowe/index.htm
>
>
>

3383. Re: NE601 Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Paul Martin <pmartin@bright.net>
Message-ID: <39057FFF.BED1A910@bright.net>
Source record: 61046

The 602/612 is now the SA612 and produced by Phillips. Also available in surface mount.
73 Paul

J M Noeding wrote:

> On Mon, 24 Apr 2000 16:11:37 GMT, py1ll@my-deja.com wrote:
>
> >
> >Why don't you use a NE612? it is modern and its datasheet is easily
> >found, for instance, at this huge URL:
> >http://www.partminerclient.com/pm_client/results_frameset.asp?url=http%3
> >A%2F%2Fwwwimg.ihserc.com%2Fcgi-bin%2Fimgconv%3FSESS=%26prod=partminer%26
> >psi=%31%33%38%33%34%34%39%32%26docid=PHIN%26maxpage=%30%30%30%37%26ipn=%
> >26PDF.x=%31%26PAGENUM=MAX%26STARTPAGE=%31%26ie=.pdf
> >--
> >Greetings,
> >
> >Luiz - PY1LL
> >
> NE612 is a low-cost version of NE602, probably not particularly
> inexpensive for amateurs?

3384. Weighted Knob?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: BarryG <bgNOSPAM@albany.net>
Message-ID: <8e40dekgj1@news.monmouth.com>
Source record: 61047

Would appreciate any leads (no pun intended) on finding a weighted tuning knob, 2 in diam for a 3/16 shaft.

Tnx & 73,
Barry N1EU

(to reply via email, please remove NOSPAM from my email address -- bee gee at albany dot net)

3385. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: RogerBeep <snide@snide.com>
Message-ID: <39057EA4.62DC@snide.com>
Source record: 61048

Gary P. Fiber wrote:
>
> Just clicked on the link to ARRL at 9:50pm PDT4-24-2000. The ARRL site
> has been Hacked. You get a site whose wording I will not repeat here.
>
> Gary

YEA... it says, "THE SYSTEM IS FUCKED".

http://www.arrl.org/

3386. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <7r3bgskhtfuqm82ca4paubtfehfu5rnac6@4ax.com>
Source record: 61049

On 25 Apr 2000 05:22:20 GMT, nielsen@primenet.com (Bob Nielsen) wrote:

>On Mon, 24 Apr 2000 21:51:41 -0700, Gary P. Fiber wrote:
>>On Mon, 24 Apr 2000 22:13:23 GMT, Jay Moyer <jmoyer43@earthlink.net>
>>wrote:
>>
>>>Are other people having problems bringing up the arrl website. Is you
>>>browser telling you that the www.arrl.org doesnt have a DNS entry.
>>>
>>>I just wanted to know if it was my service provider or if the site
>>>really was down.
>>>
>>>Jay Moyer
>>>jmoyer43@earthlink.net
>>
>>
>>Just clicked on the link to ARRL at 9:50pm PDT4-24-2000. The ARRL site
>>has been Hacked. You get a site whose wording I will not repeat here.
>
>Actually it appears that the DNS serving arrl.org died. Earlier today
>it could not be reached and the arrl.org entry appeared to have timed
>out, but now nslookup actually returns the address of one of the
>nameservers serving arrl.org (s1.netfirms.com), which appears to have
>been hacked. If you access www.arrl.org using the CORRECT IP address,
>you will see that it is still there:
>
>http://204.245.15.10
>
>Where is a Wouff Hong or a Rettysnitch when you need one?
>
>Bob, n7xy

When I type www.arrl.org I get a site that says
" The system is F---ed
Pirate radio 4 life baybee @#^#@
brought to you be the Coffe Mother F---ers, werd up "

Does not seem like a lost DNS to me but glad to hear the site itself
is ok

Gary.

3387. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000425084326.20699.00000030@ng-cg1.aol.com>
Source record: 61050

>I found that rewinding the alternator with more
>turns of smaller wire, and making it a 6 pole single phase worked
>extremely well. 600 shaft rpm "gave more out than in."
>
>
That should be a neat trick.
Now if you can get a motor with this same efficencey you could hook it all
together, give it a spin and it would run forever.

3388. Re: resistors to stop vhf parasitics?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000425084950.20699.00000031@ng-cg1.aol.com>
Source record: 61051

```
>
>In article <39032001.450303161@news.erols.com>,
> n2cqr@erols.com (Bill Meara ) wrote:
>> I was reading through some of the old W1FB articles in QRP Classics.
>> At one point he discusses the use of low value resistors in HF
>> circuits to suppress possible vhf oscillations/parasitics. How does
>> this work? Is is because the resistors have some inductance that
>> affets the vhf? Does this mean that ordinary old carbon resistors
>> wouldn't work in this application?
>>
>

The resistors work with added reactance such as a paralell coil or through
stray reactance to suppress the VHF content. They would do little by
themselves.
```

3389. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8e43nd$shl6@icet.net.nih.gov>
Source record: 61052

If you are in the mood to build super-regens, please try my new circuit.
I made a couple of prototypes, but would like someone else to try.
Sorry, you cannot use a CK722 on this one. It is a broadcast band
FM radio (100 MHz) and requires a 100 MHz FET (J310, 2N4416). The
radio is a 1 transistor super regen, plus audio amp. Let me know
if you have any success.

http://www.somerset.net/arm/fm_only_lowtech.html#projects

- Andy (WA3LTJ)

Russ.Shaw (russell@webaxs.net) wrote:
: I made a one-transistor super-regenerative circuit on the weekend. It used
: a BC548 and was tuned for 27MHz. You can see the detected noise directly
: on a cro. It was self-quenching at 10kHz. It also worked as an 80dB log-amp.
:
: HELIO SAKAYA wrote:
: >
: > Many thanks to the people that wrote back. I was moving my office this
: > past week-end, and my computer was off-line for a few days. I'll be in
: > touch with you guys that so kindly offered to exchange information on
: > those great old circuits. It's true that modern semiconductors (Mosfets
: > and the like) will perform better than those vintage devices, but wasn't
: > it a thrill to push a CK722 to oscilate at 1Mhz in those AM broadcast
: > transmitters? Weren't you mesmerized by a SB-103 pulling in 10M CQ's at
: > a time that junction transistors struggled to reach 5Mhz? Well, I was
: > and I guess I'm trying to go back to those worry free times riding on
: > those old regenerative circuits.
: > Thanks again.
: > 73 de Helio KE4KKS
: >
: > Andrew R Mitz wrote:
: > >
: > > I will pass this message along to the webmaster.
: > >
: > > Kludge (X@Y.Z.net) wrote:
: > > : On 21 Apr 2000 22:40:49 GMT, Andrew R Mitz scribbled:
: > > :
: > > : >There is a CK722 web site;
: > > : >http://www.geocities.com/ck722transistor/history/rca.htm
: > > : >I also am interested in super regen circuits. Drop
: > > : >me an email at arm@gnode.org
: > > : >-- Andy
: > > :
: > > : re: http://www.geocities.com/ck722transistor/

: > > : I was looking at this site the other day following a previous
: > > : post of yours.
: > > : How do you expect the search engine to find and catalog this web
: > > : site with each and every page totally graphical (that is: textless)
: > > : and with no informative meta-tags?
: > > :
: > > : It is a Very Good presentation, tho'.
: > > :
: > > : Jonesy W3DHJ
: > > : Who built a CK722(3) + CK768 Superhet AM rcvr somewhere around 1957-58
: > > :
: > > : --
: > > : Marvin L Jones | jonz | W3DHJ | OS/2
: > > : Gunnison, Colorado | @ | Jonesy | linux __
: > > : 7,703' -- 2,345m | frontier.net | DM68mn SK
: > >
: > > --
: > >
: > > Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
: > > Laboratory of Systems Neuroscience
: > > Section on Neurophysiology
: > > National Institute of Mental Health
: > > Bethesda, Maryland 20892-4401
:
: --
: **
: * Russell Shaw, B.Eng, M.Eng(Research) *
: * Electronics Consultant *
: * email: russell@webaxs.net *
: * Australia *
: **

--

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
Laboratory of Systems Neuroscience
Section on Neurophysiology
National Institute of Mental Health
Bethesda, Maryland 20892-4401

3390. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <ut4bgs48idmlharlcluvj41vge2p5eqa8c@4ax.com>
Source record: 61053

>>Actually it appears that the DNS serving arrl.org died. Earlier today
>>it could not be reached and the arrl.org entry appeared to have timed
>>out, but now nslookup actually returns the address of one of the
>>nameservers serving arrl.org (s1.netfirms.com), which appears to have
>>been hacked. If you access www.arrl.org using the CORRECT IP address,
>>you will see that it is still there:
>>
>>http://204.245.15.10
>>
>>Where is a Wouff Hong or a Rettysnitch when you need one?
>>
>>Bob, n7xy
>
>When I type www.arrl.org I get a site that says
>" The system is F---ed
>Pirate radio 4 life baybee @#^#@
>brought to you be the Coffe Mother F---ers, werd up "
>
>Does not seem like a lost DNS to me but glad to hear the site itself
>is ok
>
>Gary.

After doing some reading since my last post I now understand the DN
for the site has been redirected to another site.

Gary

3391. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <IJhN4.21559$T04.205811@typhoon.ne.mediaone.net>
Source record: 61054

I didn't try yesterday, but today I can still get e-mail through
mycall@arrl.net.

Drew
AA1UZ

> Are other people having problems bringing up the arrl website. Is you
> browser telling you that the www.arrl.org doesnt have a DNS entry.
>
> I just wanted to know if it was my service provider or if the site
> really was down.
>
> Jay Moyer
> jmoyer43@earthlink.net

3392. Re: Weighted Knob?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <3905BAEC.3A60874C@valley.net>
Source record: 61055

BarryG wrote:

> Would appreciate any leads (no pun intended) on finding a weighted tuning
> knob, 2 in diam for a 3/16 shaft.
>
> Tnx & 73,
> Barry N1EU

Hello--

Some years ago, someone wrote an entry for a QST "Hints and Kinks" column describing various strategies for creating weighted tuning knobs; these included filling the grooves in the rear of a suitably-sized knob with...

--solder melted in a few drops at a time;
--mixing lead or steel shot and white glue or epoxy cement.

73,
Brad AA1IP

3393. Re: NE601 Info

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <3905C3AA.F5CA5980@midwestmicro-tek.com>
Source record: 61056

The NE602A is now the Philips SA602A, you can down load the data sheets here

http://www.semiconductors.com/pip/NE602AD

you can get a lot of app-notes here

http://www.semiconductors.com/cgi-bin/search/search.pl

and you can by the old NE602A for $2.25 each here

http://bgmicro.com

Rick KC0GIX

- WDï¿½HCO - Dallas TX - wrote:

> This was probably covered a million times on this newsgroup but I have
> not been able to find it. I am looking for a spec sheet on this RF chip.
> I want to modify the mixer section on my Ten Tec Century 21.
>
> Went to the Signetics web site but they don't have any data sheets
> there. I was also told that Radio Electronics had an article by Joe Carr
> back in 1997.
>
> Any help would be appreciated. -B

3394. new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Jeff VE3NVY <aj713@hwcn.org>
Message-ID: <Pine.GSO.4.05.10004251409090.1122-100000@james.hwcn.org>
Source record: 61057

remember th egoo dol ddays when every electronic stor ein the country had a heathkit product on their shelf where every radio enthisiat had a project half finishe dsitting on his desk and half the radios on th emarket were homebrewed an dnotthos efancy new electronic gizmos well there is a new comapny starting up in hamilton ontario an dthey will ahve kits for everything from kits gor you rkids (like a simple blinky flasher) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at home an daccesorcies be it a dsp or even an antennae tuner it will be coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh word aroun d finally the ol dwill b enew again wouldnt you all like a kit to say i built it myself

jeff
aj713@hwcn.org -- or--
ve3nvy@rac.ca

3395. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <3905E185.809@pop.removethistomailme.net>
Source record: 61058

Jeff VE3NVY wrote:
>
> remember th egoo dol ddays when every electronic stor ein the country had
> a heathkit product on their shelf where every radio enthisiat had a
> project half finishe dsitting on his desk and half the radios on th
> emarket were homebrewed an dnotthos efancy new electronic gizmos well
> there is a new comapny starting up in hamilton ontario an dthey will ahve
> kits for everything from kits gor you rkids (like a simple blinky flasher
>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
> home an daccesorcies be it a dsp or even an antennae tuner it will be
> coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
> word aroun d finally the ol dwill b enew again wouldnt you all like a
> kit to say i built it myself
>
> jeff
> aj713@hwcn.org -- or--
> ve3nvy@rac.ca

Eh?

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3396. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: davem@cs.ubc.ca
Message-ID: <8e4qqk$6p7$1@newcastle.cs.ubc.ca>
Source record: 61059

Jeff VE3NVY <aj713@hwcn.org> writes:
>
>remember th egoo dol ddays when every electronic stor ein the country had
>a heathkit product on their shelf where every radio enthisiat had a
>project half finishe dsitting on his desk and half the radios on th

Another source of kits would be nice.

However, let me make a suggestion: Hire someone else to write the
manuals! Preferably someone who understands "sentence" and "paragraph".

Dave

3397. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <3905f05b.91836357@news.azstarnet.com>
Source record: 61060

On Tue, 25 Apr 2000 12:18:45 -0600, John Miles
<jmiles@pop.removethistomailme.net> wrote:

>Jeff VE3NVY wrote:
>>
>> remember th egoo dol ddays when every electronic stor ein the country had
>> a heathkit product on their shelf where every radio enthisiat had a
>> project half finishe dsitting on his desk and half the radios on th
>> emarket were homebrewed an dnotthos efancy new electronic gizmos well
>> there is a new comapny starting up in hamilton ontario an dthey will ahve
>> kits for everything from kits gor you rkids (like a simple blinky flasher
>>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>> home an daccesorcies be it a dsp or even an antennae tuner it will be
>> coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>> word aroun d finally the ol dwill b enew again wouldnt you all like a
>> kit to say i built it myself
>>
>> jeff
>> aj713@hwcn.org -- or--
>> ve3nvy@rac.ca
>
>Eh?
>
>-- jm

Yeah,

Let's hope the instruction manuals are written better than this announcement.

N7WS

3398. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <3905f5ce.7447186@news.eunet.yu>
Source record: 61061
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

3399. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8gbv32.3ll.X@animas.frontier.net>
Source record: 61062

On Tue, 25 Apr 2000 14:12:49 -0400, Jeff VE3NVY scribbled:
>
>remember th egoo dol ddays when every electronic stor ein the country had
>a heathkit product on their shelf where every radio enthisiat had a
>project half finishe dsitting on his desk and half the radios on th
>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>there is a new comapny starting up in hamilton ontario an dthey will ahve
>kits for everything from kits gor you rkids (like a simple blinky flasher
>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>home an daccesorcies be it a dsp or even an antennae tuner it will be
>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>word aroun d finally the ol dwill b enew again wouldnt you all like a
>kit to say i built it myself

I remember The Good Olde Days when punctuation, spelling, and
proofreading was considered the proper and courteous Thing To Do.

3400. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: nielsen@primenet.com
Message-ID: <slrn8gbvms.ssq.nielsen@bob.localnet>
Source record: 61063

The DNS system was hacked and www.arrl.org got redirected to a
different site. arrl.net wasn't affected.

You can reach the League's web site by pointing your browser to the
correct IP address instead of the FQDN:

http://209.140.206.201

On Tue, 25 Apr 2000 14:12:56 GMT, robert leavitt wrote:
>I didn't try yesterday, but today I can still get e-mail through
>mycall@arrl.net.
>
>Drew
>AA1UZ
>
>> Are other people having problems bringing up the arrl website. Is you
>> browser telling you that the www.arrl.org doesnt have a DNS entry.
>>
>> I just wanted to know if it was my service provider or if the site
>> really was down.
>>
>> Jay Moyer
>> jmoyer43@earthlink.net
>
>

--
Bob Nielsen, N7XY (RN2) nielsen@primenet.com
Tucson, AZ DM42nh QRP-L #1985 SOC #77 http://www.primenet.com/~nielsen

3401. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <390601FF.BEFA424C@bellsouth.net>
Source record: 61064

Kludge wrote:
>
> On Tue, 25 Apr 2000 14:12:49 -0400, Jeff VE3NVY scribbled:
> >
> >remember th egoo dol ddays when every electronic stor ein the country had
> >a heathkit product on their shelf where every radio enthisiat had a
> >project half finishe dsitting on his desk and half the radios on th
> >emarket were homebrewed an dnotthos efancy new electronic gizmos well
> >there is a new comapny starting up in hamilton ontario an dthey will ahve
> >kits for everything from kits gor you rkids (like a simple blinky flasher
> >) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
> >home an daccesorcies be it a dsp or even an antennae tuner it will be
> >coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
> >word aroun d finally the ol dwill b enew again wouldnt you all like a
> >kit to say i built it myself
>
> I remember The Good Olde Days when punctuation, spelling, and
> proofreading was considered the proper and courteous Thing To Do.

...WERE considered the proper and courteous THINGS to do.

Let me suggest: ... when good punctuation and spelling were still
valued,
and proofreading was considered a courtesy to the
reader.

3402. Wanted: Atlas Mobile Mount

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: jbr101@my-deja.com
Message-ID: <8e53em$2nm$1@nnrp1.deja.com>
Source record: 61065
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I'm looking for a mobile mount for the Atlas 180/210/215 series of
transceivers.

If you have one kicking around you want to sell please contact me.

73,
Jeff
N6MNI

Sent via Deja.com http://www.deja.com/
Before you buy.

3403. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8gc541.m5c.X@animas.frontier.net>
Source record: 61066

On Tue, 25 Apr 2000 16:37:19 -0400, Ralph E. Carter scribbled:
>Kludge wrote:
>>
>> I remember The Good Olde Days when punctuation, spelling, and
>> proofreading was considered the proper and courteous Thing To Do.
>
>...WERE considered the proper and courteous THINGS to do.

Mea Culpa! I went back and added "...spelling, and proofreading..."
and, then, I did not (re)proofread it! <SG>

3404. Transmitting tube sockets

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Warren Weber <hiho@ris.net>
Message-ID: <sgc5stg6cdo81@corp.supernews.com>
Source record: 61067

Is this a proper NG to post this on? If not please advise. I have four sockets to sell. Open to offers. E mail for photos. Warren

3405. Re: Weighted Knob?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <39061A08.E3FD44D4@carroll.com>
Source record: 61068

If the plastic knob is hollow, try filling it with a mixture of fine lead or steel shot and epoxy glue. Did this on an old Heath SB-102, and it worked great.

73,
Bob Weiss N2IXK

BarryG wrote:

> Would appreciate any leads (no pun intended) on finding a weighted tuning
> knob, 2 in diam for a 3/16 shaft.
>
> Tnx & 73,
> Barry N1EU
>
> (to reply via email, please remove NOSPAM from my email address -- bee gee
> at albany dot net)

3406. FS NOS DOWKEY RELAY

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: k8bvj@webtv.net
Message-ID: <18448-390618BC-37@storefull-237.iap.bryant.webtv.net>
Source record: 61069

FS NOS DOW KEY RELAY DK60G
FS Dow key relay dk60g.....NOS...never been
used...still in the box after all these years. Was
going to use it with my 50s station but needed a set
of contacts to turn my vfo on......$88 shipped
Check it out at my site >> still available
Listing #66516 - Submitted on 04/24/00 by k8bvj@webtv.net, Callsign:
K8BVJ, Web Site: http://community.webtv.net/k8bvj/Dowkeyrelay

3407. Need HR Article Index - Mar,Apr 1990

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Donald R Montgomery <donrm@sr.hp.com>
Message-ID: <8e58ut$o3f$1@nirvana.sr.hp.com>
Source record: 61070

I didn't get any returns on my query regarding the alternator solid state synchroscope and believe it may be in either the March or April 1990 Ham Radio Magazine. These are the only two issues of HR that I'm missing.

Could someone look at the article index in these two issues and let me know if this construction article is there?

TIA and 73
Don K6LTS
donrm@sr.hp.com

3408. Cabinet screws ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Ham <hduff@ica.net>
Message-ID: <39062A46.3F280F8D@ica.net>
Source record: 61071

I'm looking for a source for metric M3 x 6 black screws as used on radio cases.
Anyone ?
Please reply by e-mail.

3409. Re: Want sked CW / VLP (=<0,5w) 40m EU

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8e5lc1$96c$1@ins21.netins.net>
Source record: 61072

```
-----BEGIN PGP SIGNED MESSAGE-----

Well, this is a little off, but if you want to try Xmting on 40m, I
can transmit on 80m (3686.4) w/ 1 watt. What the heck can it hurt?
I live in Iowa, in the midwestern US. the 80m QRP CW homebrew rig is
the only thing I have on HF except for a 10m HTX-10. (but I'm looking
to pput a 40m QRP rig together)

- --
```

*Brendan K Callahan K�EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

```
"D@niel" <dsavel@easynet.fr> wrote in message
news:M2rI4.43073$J3.34732@tengri.easynet.fr...
> All in tittle... I'm looking for sked in Europa (a dream...USA ?)
> CW / VLP Pwr =< 0,5w.
>
> 72 D@niel F5ITU
>

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

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Tel0oQWHM4RMivb3zYRA91INrXXfU7Vvi77LSsAIO+7ZCiviaKHUig==
=RbHu
-----END PGP SIGNATURE-----
```

3410. Re: QRP final transistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8e5m4b$1eu$1@ins21.netins.net>
Source record: 61073

-----BEGIN PGP SIGNED MESSAGE-----

I am using the 3553 in my QRP rig (I managed to break the leads off
of the original transistor for the kit), and so substituted the 3553
with a heat sink. It works fine, and puts out a tad more than the
original transitor (1w/1.25W). I'm sure I could boost that to 2, or
even 3 with np, however, my antenna is not matched well (about 4:1),
so I don't want to push it. But 3553s are cheap, so if I fry it with
bad matching, while learning how to make HF antennas for 80m <shrug>
who cares.

It has been through 18:1 SWR matches, and survived quite nicely. I
recommend it if you think you might fry one <grin>.
(The rating for it is 5w dissipation--a big heat sink may get you
that, but have it tuned first)

- --

*Brendan K Callahan K&#65533;EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

"Steve Ratzlaff" <sratzlaf@flash.net> wrote in message
news:390104E9.F9F2F5C1@flash.net...
> Hi Rick,
> I believe Radio Shack is currently carrying the 2N3553, which would
> make a good HF QRP output transistor, with a heat sink on it

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

iQEVAwUBOQZbxmg7NqRhJM2xAQEsAggAgDCSlV59jB2k/C2+50eIRzeS0viZXNSC
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+VRZIxt+wlaU9UlyFeE5SL14o9QLebpMO2mxd5RLNlnCOQPBivptPERVuGJCmjvx
fcbqYlMaaIO0qdMzBLR7Gdzf6NeiHbZKpZt3JdSBWqxULBInYI2IRw==
=SoCv
-----END PGP SIGNATURE-----

3411. Antenna Rotor Controls

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8e5me3$p50$1@ins21.netins.net>
Source record: 61074

```
-----BEGIN PGP SIGNED MESSAGE-----

There seems to be a serious lack of info on the web for
repairing/building rotor control boxes. In particular, I have what I
believe to be a AR22 (I rent the house--it came with it)on a mast--no
box of course. Anyone have the schematic for this? Or any other
control boxes? I am thinking of putting up such things on my
http://www.qsl.net/k0ees page.

Also, is there a simple way to test the rotor (such as 12VDC across
two particular wires), before I try to build a control box? It has
an 8 wire cable attached to it. If necessary, I can grab a digital
pic of it and post it if anyone wants to confirm the brand/model for
me.

- --

*Brendan K Callahan K�EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

iQEVAwUBOQZc/mg7NqRhJM2xAQEDSAf/THiWjm4vSEGr4dGlXkReBFW4bO13ErZK
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oyAYO1ceOn7hkxSGPbwCX+8xqI23RTAvJgUTRPncYfeoTX3ZX8DqqbfFeJ5R3DlG
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xS/ZQUWjoELVPgKpEa/MI2kgXHRIF8RLcHGjBO//DyXLLPreTWKUEg==
=hc/Z
-----END PGP SIGNATURE-----
```

3412. HTX-10 mod/CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8e5ndp$7hv$1@ins21.netins.net>
Source record: 61075

```
-----BEGIN PGP SIGNED MESSAGE-----

I have a HTX-10--nice radio for it's price, and was a great radio for
my entry onto HF this January.

I passed the 5wpm, and I really want to work on it, so I don't lose
it. 10m seems to ahve better oppurtunities for me at present than
the 80m QRP rig I built.

1) Anyone ahve a clue how to possibly modify this radio for CW
operation?

2) What is the difference between unmodulated AM (mic switch shut
off--I homebrewed a Sony studio lowZ mic to work with this as a base
station--everyone says it sounds way better than the stock mic)
(picture is at www.qsl.net/k0ees/ ), and CW? Am I violating anything
by keying the PTT switch in AM mode on the CW portions with the mic
shut off?

73 de K0EES/AE (and no, I won't touch the extra/Advanced CW bands
until I get a faster speed--however, I have no problem using the
Extra Phone bands--seeing as I *can* talk 20wpm <grin>)

- --

*Brendan K Callahan K0EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

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=z6yF
-----END PGP SIGNATURE-----
```

3413. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <2aucgsse14lfhvmaddjjhn88u0hctfk21l@4ax.com>
Source record: 61076

>>Actually it appears that the DNS serving arrl.org died. Earlier today
>>it could not be reached and the arrl.org entry appeared to have timed
>>out, but now nslookup actually returns the address of one of the
>>nameservers serving arrl.org (s1.netfirms.com), which appears to have
>>been hacked. If you access www.arrl.org using the CORRECT IP address,
>>you will see that it is still there:
>>
>>http://204.245.15.10
>>
>>Where is a Wouff Hong or a Rettysnitch when you need one?
>>
>>Bob, n7xy
>
>When I type www.arrl.org I get a site that says
>" The system is F---ed
>Pirate radio 4 life baybee @#^#@
>brought to you be the Coffe Mother F---ers, werd up "
>
>Does not seem like a lost DNS to me but glad to hear the site itself
>is ok
>
>Gary.

After doing some reading since my last post I now understand the DN
for the site has been redirected to another site.

Gary

3414. Looking for VHF DUPLEXER'S

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: hacker <dbraggs@hcis.net>
Message-ID: <39075340$0$27638@wodc7nh7.news.uu.net>
Source record: 61077

I have some stuff to trade for one.
VHF AND UHF RADIO'S
Just E-MAIL ME FOR INFO

3415. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: John Miller <jayem@alphalink.com.au>
Message-ID: <39054576@news.alphalink.com.au>
Source record: 61187

Another book to look out for is In Marconi's Footsteps by Peter Jensen, ISBN 0-86417-607-4, included are sixty pages of replica instructions.

All the best to all
John

3416. Re: Only for discussion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <jkb9gs0unpu299pfe65nkrljmlp7lr9i8b@4ax.com>
Source record: 61188

On Mon, 24 Apr 2000 16:31:14 GMT, py1ll@my-deja.com wrote:

>Affirmative: "In the receiver end, if we use a diode detector with one
>polarity, we will detect the modulation S1 and with the other polarity
>we will detect S2".

To problem with radiated signal or AC coupled signals is that you
loose the reference level, "0" level, thus, you can not separate S1
and S2 independently, since the reference level would be midway
between S1 and S2.

>3 - Will this method work for conducted signal, that is, not radiated
>but through wires?

If you have DC-connection through out the system, then you have a
solid reference level and S1 and S2 could be extracted simultaneously.

3417. Re: JFET winner: J310 (was Re: Your favorite FET?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <39050105.35A5C43E@webaxs.net>
Source record: 61189

Usually, there is a 'magic' source resistance one can use that makes
the transconductance stable, over all production variations.

I only use fets for low-freq, hi-z circuits, and dual-gate mosfets for
their neutralization at vhf. For all else, bjts are superior, and have
low production variations when used properly.

J M Noeding wrote:
>
> On Sun, 23 Apr 2000 15:09:19 -0400, "Ralph E. Carter"
> <carterr@bellsouth.net> wrote:
>
> >
> >Wherever a MPF102 is specified, I think you can assume: "Any
> >small-signal low noise JFET. Trim as needed."
> >For a basic hobbyist like myself, any old JFET with appropriate specs
> >would do fine.
> >
> seems that MPF102 is very loosely specified, gm= 2 - 7.5mmho, compared
> to MPF105 (2N5459) which has 2-4.5mmho, and J310 with 8-20mmho
>
> could it be that if a device is out of specifications, it is sold as
> MPF102?
>
> 73 jan-martin
> LA8AK

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3418. Re: CK722,2N107,SB-100...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <39050288.802B2E88@webaxs.net>
Source record: 61190

I made a one-transistor super-regenerative circuit on the weekend. It used
a BC548 and was tuned for 27MHz. You can see the detected noise directly
on a cro. It was self-quenching at 10kHz. It also worked as an 80dB log-amp.

HELIO SAKAYA wrote:
>
> Many thanks to the people that wrote back. I was moving my office this
> past week-end, and my computer was off-line for a few days. I'll be in
> touch with you guys that so kindly offered to exchange information on
> those great old circuits. It's true that modern semiconductors (Mosfets
> and the like) will perform better than those vintage devices, but wasn't
> it a thrill to push a CK722 to oscilate at 1Mhz in those AM broadcast
> transmitters? Weren't you mesmerized by a SB-103 pulling in 10M CQ's at
> a time that junction transistors struggled to reach 5Mhz? Well, I was
> and I guess I'm trying to go back to those worry free times riding on
> those old regenerative circuits.
> Thanks again.
> 73 de Helio KE4KKS
>
> Andrew R Mitz wrote:
> >
> > I will pass this message along to the webmaster.
> >
> > Kludge (X@Y.Z.net) wrote:
> > : On 21 Apr 2000 22:40:49 GMT, Andrew R Mitz scribbled:
> > :
> > : >There is a CK722 web site;
> > : >http://www.geocities.com/ck722transistor/history/rca.htm
> > : >I also am interested in super regen circuits. Drop
> > : >me an email at arm@gnode.org
> > : >-- Andy
> > :
> > : re: http://www.geocities.com/ck722transistor/
> > : I was looking at this site the other day following a previous
> > : post of yours.
> > : How do you expect the search engine to find and catalog this web
> > : site with each and every page totally graphical (that is: textless)
> > : and with no informative meta-tags?
> > :
> > : It is a Very Good presentation, tho'.
> > :
> > : Jonesy W3DHJ
> > : Who built a CK722(3) + CK768 Superhet AM rcvr somewhere around 1957-58
> > :

> > : --
> > : Marvin L Jones | jonz | W3DHJ | OS/2
> > : Gunnison, Colorado | @ | Jonesy | linux __
> > : 7,703' -- 2,345m | frontier.net | DM68mn SK
> >
> > --
> >
> > Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
> > Laboratory of Systems Neuroscience
> > Section on Neurophysiology
> > National Institute of Mental Health
> > Bethesda, Maryland 20892-4401

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3419. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: nielsen@primenet.com
Message-ID: <slrn8gaas9.q8c.nielsen@bob.localnet>
Source record: 61191

On Mon, 24 Apr 2000 21:51:41 -0700, Gary P. Fiber wrote:
>On Mon, 24 Apr 2000 22:13:23 GMT, Jay Moyer <jmoyer43@earthlink.net>
>wrote:
>
>>Are other people having problems bringing up the arrl website. Is you
>>browser telling you that the www.arrl.org doesnt have a DNS entry.
>>
>>I just wanted to know if it was my service provider or if the site
>>really was down.
>>
>>Jay Moyer
>>jmoyer43@earthlink.net
>
>
>Just clicked on the link to ARRL at 9:50pm PDT4-24-2000. The ARRL site
>has been Hacked. You get a site whose wording I will not repeat here.

Actually it appears that the DNS serving arrl.org died. Earlier today
it could not be reached and the arrl.org entry appeared to have timed
out, but now nslookup actually returns the address of one of the
nameservers serving arrl.org (s1.netfirms.com), which appears to have
been hacked. If you access www.arrl.org using the CORRECT IP address,
you will see that it is still there:

http://204.245.15.10

Where is a Wouff Hong or a Rettysnitch when you need one?

Bob, n7xy

3420. Dick Smith Commander 2mtr. kitset output power?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Gerard van Antwerpen <gvantwerpen@xtra.co.nz>
Message-ID: <39054012.A8D5156B@xtra.co.nz>
Source record: 61192

Hi,

I've built a 2 mtr. kitset 'Dick Smith Commander' that somebody had laying around for some 15 years. It works fine, but I think I'm not getting the right output power, according to the manual it should be 10 - 15 Watts, but I'm only getting about 5W.
Anybody around that has got one and give me some pointers??
Thanks
Gerard, ZL2GVA
Blenheim, NZ

3421. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sgahj53qcdo59@corp.supernews.com>
Source record: 61193

In article <39010BDB.39D2@surfsouth.com>, johngrac@surfsouth.com says...
>
>Has anyone come up with a plan to use a car alternater to charge deep
>cycle batteries using "wind power". I like QRP, one windy day will keep
>me going a long time! KE4QOP John

The 'break even' point of a car alternator is at a higher RPM than
you want it to be. I found that rewinding the alternator with more
turns of smaller wire, and making it a 6 pole single phase worked
extremely well. 600 shaft rpm gave more out than in.

3422. Re: ARRL website

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-25 00:00:00 UTC
From: Mike <m.j.willis@rl.ac.uk>
Message-ID: <8e3h6u$g5e@newton.cc.rl.ac.uk>
Source record: 61194

> Just clicked on the link to ARRL at 9:50pm PDT4-24-2000. The ARRL site
> has been Hacked. You get a site whose wording I will not repeat here.
>
Do you still have capital punishment in CT ?

3423. (no subject)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: maggie verry <tuathadedaan@xtra.co.nz>
Message-ID: <3906A17E.DC8A565B@xtra.co.nz>
Source record: 61078

unsubscribe

3424. NEWSGROUP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: maggie verry <tuathadedaan@xtra.co.nz>
Message-ID: <3906A247.D1032DC8@xtra.co.nz>
Source record: 61079

Please can you tell us how to unsubscribe.

MAGGIE

3425. Re: HTX-10 mod/CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <3906CC8A.2C5E5FE@bellsouth.net>
Source record: 61080

Brendan K Callahan wrote:

> -----BEGIN PGP SIGNED MESSAGE-----
>
> I have a HTX-10--nice radio for it's price, and was a great radio for
> my entry onto HF this January.
>
> I passed the 5wpm, and I really want to work on it, so I don't lose
> it. 10m seems to ahve better oppurtunities for me at present than
> the 80m QRP rig I built.
>
> 1) Anyone ahve a clue how to possibly modify this radio for CW
> operation?
>
> 2) What is the difference between unmodulated AM (mic switch shut
> off--I homebrewed a Sony studio lowZ mic to work with this as a base
> station--everyone says it sounds way better than the stock mic)
> (picture is at www.qsl.net/k0ees/), and CW? Am I violating anything
> by keying the PTT switch in AM mode on the CW portions with the mic
> shut off?
>
> 73 de Kï¿½EES/AE (and no, I won't touch the extra/Advanced CW bands
> until I get a faster speed--however, I have no problem using the
> Extra Phone bands--seeing as I *can* talk 20wpm <grin>)
>
> - --

Build a 700Hz-800Hz audio oscillator. Put the output of this tone into the mic input (you will have to level adjust the tone). With the rig in SSB mode, put it in transmit and key the oscillator with your key.

Dale W4OP

3426. Re: NEWSGROUP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Wayne Strickland <w9bbb@megsinet.net>
Message-ID: <3906EAF2.AD8CA210@megsinet.net>
Source record: 61081

Hi Maggie,Just click on The news group you want to unsubscribe too and
then click on File,Find unsubscribe.Wayne

maggie verry wrote:

> Please can you tell us how to unsubscribe.
>
> MAGGIE

3427. FS: 11 GHZ Sources

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Norman Gillaspie <norman@pcseng.com>
Message-ID: <ECCN4.3106$r91.137364@news.pacbell.net>
Source record: 61082

Hello,

I have a qty of 75 microwave sources.

I was told that they are in the 11 GHZ range.

These units have a 1.8 Ghz or so DRO PLL
and multiplier chain.

The output frequency is around 12Ghz. The PLL
is a Fujistu MB1502.

It looks like the unit has 2 outputs at 12Ghz and
a sniffer port for the 1.8 Ghz DRO.

There is a Motorola 68HC811 microcontroller and
a "D" connector for power and communication.

There is also a 10MHZ TCXO made by NDK on the units.

I have high resolution jpeg pictures I can send you if interested.

I am asking 25.00 each or two for $40.00 including shipping in the US.

These were made for P-COM. and were manufactured in
96 and most of them are new. I haven't had a chance nor the time to check
them out. They are 3 by 3 by 1.5 inches.

If Interested please and want pictures send a request to

Email norman@pcseng.com

Regards Norman

3428. Re: Wanted:KK7B R2 board

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <3906F821.5E03@ixpres.com>
Source record: 61083

Jim Pennell wrote:
>
> Last time I checked, the Kanga website indicated the KK7B R2 kit is not
> avaliable.
>
> Apparently, they are going to replace it with the "R2 PRO" which is not
> ready yet, but close enough that they've stopped carrying the original R2
> kit.
>
> http://www.bright.net/~kanga/kanga/
>
> Jim
> N6BIU
>
> jpennell@ix.netcom.com

Jim OM,

You can get the bare board from Kanga. That is what I did. The receiver can be built easily from readily available parts and/or your junkbox. I usually find that ready-made parts kits are more expensive than my own acquisition cost for parts, and also using my own parts, I can hand-match certain components (such as the audio phase shift components) to maximize the sideband suppression; I am getting -50dB on my R2. You can also make your own balanced mixers at lower cost, using hot-carrier diodes, instead of purchasing ready-made mixers. Now that I have built one receiver, I think my next one will have my own PC board layou also, which I can optimize for my particular situation.

73 and GL,
Don, W6JL

3429. Re: Vacuum tube down converters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8e772qvss1@slb6.atl.mindspring.net>
Source record: 61084

In article <3901ee03@ecn.ab.ca>, <ve6xtc@ecn.ab.ca> wrote:
>
> Hi folks;
> Does anybody have a schematic for a simple vacuum tube
>down converter? I'd like to try and build one for converting 50 MHz
>signals down to 10 MHz so I can listen to any band openings using my short
>wave radio. Arnie Coro, CO2KK has a transister model but I tend to fry
>transisters. Because of my poor vision, I tend to melt my glasses and
>burn my nose a lot too.

Suggestion #1: Use machined pin IC socket pins. You can clip them out
of a plastic dip socket frame and solder in the pin and then later plug
in the transistor. They won't add that much stray capacitance used by
themselves. You can get a handle on them by putting a 24 or 22 gauge
solid wire in the socket part. Make sure the wire is small enough not
to spread the insert.

Suggestion #2: Go way back in time. Digging out the oldest Handbook
I've got (1962), the 6 meter converter in the VHF Receivers chapter
uses Nuvistor tubes, which would be just as much trouble as transistors.
And a heck of a lot more expensive these days.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

3430. Re: NEWSGROUP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8ge87m.1r3.X@animas.frontier.net>
Source record: 61085

```
On Wed, 26 Apr 2000 08:11:15 -0500, Wayne Strickland scribbled:
>Hi Maggie,Just click on The news group you want to unsubscribe too and
>then click on File,Find unsubscribe.Wayne

All well and good -- *if* you are using a silly clicker
to read newsgroups or email...
```

3431. Re: Braiding small wires.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <390725F5.1D07B71B@agilent.com>
Source record: 61086

Here's one of the best (of a very few I've found!) web pages on Litz wire. This is the top page...the details are buried in pages under it. For example, they list 8 different types of Litz wire construction.

http://www.neewcweb.com/litz/litz.htm

Of course, the useful frequency range depends on what you are doing. If you're involved with high power, Litz wire could be useful to down into the audio range, and if you're working with tiny stuff, it could do you some good above 2MHz, though probably not much above. They use a LOT of Litz wire at the megawatt transmitting station on ~20kHz a wavelength or so from here.

Cheers,
Tom

Lutan wrote:
>
> Ralph E. Carter wrote:
> >
> > One thing I haven't seen, is how to braid Litz wire.
> > Can someone point me to this?
>
> Well, the Litz I've seen in loading coils and variometers in the
> transmitters I used---wires up to 1/4" diameter---were not braided or
> woven. They more closely conformed to ordinary rope manufacturer; in
> other words, a number of fibers are twisted together to form yarns,
> which are then twisted together in the opposite direction to the fibers
> to form strands. The strands are twisted in the opposite direction to
> the yarns to form the completed rope. Though in the case of Litz wire
> yarns were twisted to form strands whereupon they formed the actual
> wire---the basic wire (#40 or so) are the yarns so to speak and
> formed strands of 40 wires each perhaps, thence a number of strands
> twisted into the final Litz wire whereupon it is finished with two
> spiral wraps (in opposite directions) of what seems like cotton
> fibers.
>
> I reckon if a fellow wishes to make their own Litz wire it could be a
> nice home project---certaintly not outside the capabilities of the
> advanced home shop machinist.

3432. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8e7bu5$r90$2@campus3.mtu.edu>
Source record: 61087

Hamm4fun <hamm4fun@aol.com> wrote:
> >I found that rewinding the alternator with more
> >turns of smaller wire, and making it a 6 pole single phase worked
> >extremely well. 600 shaft rpm "gave more out than in."
> >
> >
> That should be a neat trick.
> Now if you can get a motor with this same efficencey you could hook it all
> together, give it a spin and it would run forever.

--> Perhaps he meant that the power generated by the windmill exceeded that
lost in the alternator's field windings.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Jazz musicians say only the most adoring things about one another;
actors, generally the same. Only writers claw and spit, even though
nobody cares but other writers, and public opinion of the attackee is
affected not at all." -- Roger Rosenblatt

3433. Re: HTX-10 mod/CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8e7dpoibt1@ins21.netins.net>
Source record: 61088

```
-----BEGIN PGP SIGNED MESSAGE-----

This is MCW, correct? If so, is that a valid emission in the CW
portions? (28.100 - 28.300)

- --

*Brendan K Callahan K*EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)
>
> Build a 700Hz-800Hz audio oscillator. Put the output of this tone
> into the mic input (you will have to level adjust the tone). With
> the rig in SSB mode, put it in transmit and key the oscillator with
> your key.
>
> Dale W4OP

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

iQEVAwUBOQc6dWg7NqRhJM2xAQEP/gf+OardMg4yttEQ+06TiSeDqjg/kVrvgi92
0oHHChmo8j+mVJhPaj5k/HuppCQnKTrRxu09l/oS/F9rnY5JX5oUPbDt3LWJKQvS
hI49mtFmyy3PIn01nFQ8zw1COu6K0D7T+932kA6n+8T8ZG1J6wX/TozcwFJ0hj8T
eCvZmt0ACHuXqpAlkmy6TmQ+SI651hdSVi5+LfpvD6X1dLlv6FHVJ3KQJQ/VSipb
6FXkL4zu3s9o/QnI9moSakqko+VZxvnYEhe/44ksUCAwevj/L5mHXP9pTVxDd3TP
7JMORONQF94R63zMmM1htm72GZ9JWpEWq6WVC3vH+oyTl33vONGFEw==
=IHKH
-----END PGP SIGNATURE-----
```

3434. FA KENWOOD TS50

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Chris Fox <cfox007@bellsouth.net>
Message-ID: <39073C13.5C8B451A@bellsouth.net>
Source record: 61089
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316817442

3435. FA ALINCO 605-TQ

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Chris Fox <cfox007@bellsouth.net>
Message-ID: <39073C9C.91E231D6@bellsouth.net>
Source record: 61090
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316824155

3436. FA TIMEWAVE DSP

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Chris Fox <cfox007@bellsouth.net>
Message-ID: <39073CEF.C2C661FB@bellsouth.net>
Source record: 61091
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316844055

3437. FA SCREWDRIVER ANTENNA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Chris Fox <cfox007@bellsouth.net>
Message-ID: <39073D3B.E92AFAC2@bellsouth.net>
Source record: 61092
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.swap

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316870226

3438. Re: HTX-10 mod/CW question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <3907508E.1CFBAE39@my-deja.com>
Source record: 61093

Brendan K Callahan wrote:
>
> -----BEGIN PGP SIGNED MESSAGE-----
>
> This is MCW, correct? If so, is that a valid emission in the CW
> portions? (28.100 - 28.300)
>
> - --
>
> *Brendan K Callahan Kï¿½EES god@netins.net
> *
> * Chaos, Panic, Disorder
> * (Looks like my work here is done)
> >
> > Build a 700Hz-800Hz audio oscillator. Put the output of this tone
> > into the mic input (you will have to level adjust the tone). With
> > the rig in SSB mode, put it in transmit and key the oscillator with
> > your key.
> >
> > Dale W4OP
>

What Dale is describing is not MCW. You would be correct if you
were using the AM mode. When you are in the SSB mode, the carrier
and one of the sidebands are suppressed and all you transmit
is a signal that is offset from your center frequency, by the
audio oscillator frequency.

This was, and may still be, a common way of producing RTTY
signals. Shift an audio oscillator 180 Hz and plug it into
the microphone jack.

It is a good idea though to make sure the audio oscillator puts
out as pure a sine wave as possible. Otherwise you will be
also transmitting the harmonics of the audio frequency. A good
low pass filter would probably be wise.

I'm a little out of touch with the newer rigs, but many of the
older commercial rigs used this very same method for their CW
mode. Usually they used a phase shift oscillator that puts out
a nice clean sine wave and is very stable.

> Brendan K Callahan wrote:
>
> > > I have a HTX-10--nice radio for it's price, and was a great
> > > radio for my entry onto HF this January.

> > >

I have a HTX-100.

> > > I passed the 5wpm, and I really want to work on it, so I don't
> > > lose it. 10m seems to ahve better oppurtunities for me at
> > > present than the 80m QRP rig I built.
> > >
> > > 1) Anyone ahve a clue how to possibly modify this radio for CW
> > > operation?
> >
> > > 2) What is the difference between unmodulated AM (mic switch shut
> > > off--I homebrewed a Sony studio lowZ mic to work with this as
> > > a base station--everyone says it sounds way better than the
> > > stock mic) (picture is at www.qsl.net/k0ees/), and CW?
> > > Am I violating anything by keying the PTT switch in AM mode
> > > on the CW portions with the mic shut off?
> > >

Well, strictly speaking, if it's not modulated, it's not AM.
On/off keying of a carrier is CW, whether you do it from a key
input or the PTT switch. You may find, however, that the built
in delays are to slow to do this effectively. It would be best
to set up a schedule with a friend and try it out.

Another thing you will run into is a problem with the receive
bandwidth. Without an external audio filter the SSB mode
bandwidth is going to be to wide to work effectively. Common
bandwidth for SSB is about 2.1 to 2.5 KHz. For CW work you
should really use a bandwidth of about 350 Hz. You can still
use it, but you may have to put up with a lot of extra signals.

If I were to suggest something (which means I'm about to), since
you already operate QRP, why don't you just get a nice
15 or 20 Meter QRP rig. These are great bands for CW. 15 Meters
has a nice big novice band for working your speed up.

I have seen old Heath HW-8s for sale lately for about $100. These
rigs run 80, 40, 20, and 15 Meters. I have one myself, and
love it. There are a lot of good older rigs available at
HamFests for good prices. With the change in the FCC rules I
expect them to even cheaper.

> > > 73 de K0EES/AE (and no, I won't touch the extra/Advanced CW bands
> > > until I get a faster speed--however, I have no problem using the
> > > Extra Phone bands--seeing as I *can* talk 20wpm <grin>)

On 10 Meters, the best CW is at the low end, 28.000 to 28.070.
As long as you are General, or above, you are welcome there.

Martin
KB7EQS

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

------------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

3439. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: jyazel@core.com
Message-ID: <3907662c.3462250@news.corecomm.net>
Source record: 61094

On Tue, 25 Apr 2000 14:12:49 -0400, Jeff VE3NVY <aj713@hwcn.org> wrote:

>
>remember th egoo dol ddays when every electronic stor ein the country had
>a heathkit product on their shelf where every radio enthisiat had a
>project half finishe dsitting on his desk and half the radios on th
>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>there is a new comapny starting up in hamilton ontario an dthey will ahve
>kits for everything from kits gor you rkids (like a simple blinky flasher
>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>home an daccesorcies be it a dsp or even an antennae tuner it will be
>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>word aroun d finally the ol dwill b enew again wouldnt you all like a
>kit to say i built it myself
>
>
>jeff
>aj713@hwcn.org -- or--
>ve3nvy@rac.ca
>

What language is this in?

3440. Wanted: Amperex 8163

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: qroking@aol.com
Message-ID: <20000426172009.03343.00000918@ng-fe1.aol.com>
Source record: 61095

Hi, I need at least one or more Amperex 8163's, must be known good and full output. e-mail me if you have any to sell...73 Lou

3441. Want to build signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39075D0A.59AA8855@midwestmicro-tek.com>
Source record: 61096

Subject pretty much says it all. I would like to build an signal generator that goes from about 30kHz to about 10MHz. Can anyone point me to a web site or mag article?

Thanks,

Rick KC0GIX

3442. Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <3907637A.230324AF@midwestmicro-tek.com>
Source record: 61097

I've recently come across a schematic for a fairly simple superhet receiver that I'd like to build. Unfortunately it is a British homebrew and requires 250v, easy to get in England, not so here. What I've got is a 1:1 lines isolating transformer rated at 50ma. I think I can just add a voltage doubler to get the 250v. But this got me thinking, will this half my current rating? I assume it will. Also just how high can I practicaly go? I like working with tubes but finding HV power transformers at a reasonable price is pretty tough. Can I just keep doubling until I get the voltage I want, halving the current as I go?

I've seen line isolation using two 12 volt power transformers back to back. In other words the 12 volt output of one is run into ther 12 volt output of a second transformer thereby giving you your original 120v back but isolated. I assume there must be some line losses, I would not think that you get 120v back out but some thing a bit less. Any knowledge on this would be great.

Thanks

Rick KC0GIX

3443. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: john graesser <graesser@tca.net>
Message-ID: <sget8qasqtj159@corp.supernews.com>
Source record: 61098

Rick Haub <rhaub@midwestmicro-tek.com> wrote in message
news:3907637A.230324AF@midwestmicro-tek.com...
> I've recently come across a schematic for a fairly simple superhet
> receiver that I'd like to build. Unfortunately it is a British homebrew
> and requires 250v, easy to get in England, not so here. What I've got is
> a 1:1 lines isolating transformer rated at 50ma. I think I can just add
> a voltage doubler to get the 250v. But this got me thinking, will this
> half my current rating? I assume it will. Also just how high can I
> practicaly go? I like working with tubes but finding HV power
> transformers at a reasonable price is pretty tough. Can I just keep
> doubling until I get the voltage I want, halving the current as I go?
>
> I've seen line isolation using two 12 volt power transformers back to
> back. In other words the 12 volt output of one is run into ther 12 volt
> output of a second transformer thereby giving you your original 120v
> back but isolated. I assume there must be some line losses, I would not
> think that you get 120v back out but some thing a bit less. Any
> knowledge on this would be great.
>
> Thanks
>
> Rick KC0GIX
>
For what use is the 240v power needed? Is it there to give hv to a tube?
Almost all transister based designs will step the power down and/or convert
to low voltage dc before it is used.
Most voltage doubling circuits not using transformers are for low current
applications, less than 100 ma. If you want to wind a transformer a simple 2
to 1 turns ratio with large enough wire to handle the current will allow you
to double or halve the voltage as needed. This will give you a supply that
can handle several amps depending on the windings you use.

I saw plans for a tesla coil once that used step up transformers in series
to get up to the operating voltage. It was dangerous in the sense that the
insulation on the wires may be rated for 600-1000 volts and offered no
protection after several step up stages when the voltages were in the
50-100000v range. You run the risk of arcing thru the insulation and having
very high voltages running loose in your cabinet. There is a reason that
those hv transformers are expensive to aquire, they require more expensive
materials and better engineering than a $1 audio isolation transformer.
thanks, John.
kc5dwd

3444. looking for

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: hacker <dbraggs@hcis.net>
Message-ID: <39087139$0$17360@wodc7nh0.news.uu.net>
Source record: 61099

I have some stuff to trade for one.
VHF AND UHF RADIO'S
Just E-MAIL ME FOR INFO

3445. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-26 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8e6p0vosb1@neptunium.btinternet.com>
Source record: 61100

It is to be hoped your assembly and operating instructions have fewer errors than your advert. Or are you just pulling legs ?

3446. Re: Dick Smith Commander 2mtr. kitset output power?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Steve <"stephen.wilson<remove>"@cmr.uq.edu.au>
Message-ID: <39078CA0.F42639E6@cmr.uq.edu.au>
Source record: 61101

Mine had a dud driver transistor to the final PA causing about 2 W out.
This was replaced free of charge at the time (c1983 !). BTW the set is
still going well - 17 years on!

Chers,

Steve W
s.wilson<remove>@cmr.uq.edu.au

Gerard van Antwerpen wrote:

> Hi,
>
> I've built a 2 mtr. kitset 'Dick Smith Commander' that somebody had
> laying around for some 15 years. It works fine, but I think I'm not
> getting the right output power, according to the manual it should be 10
> - 15 Watts, but I'm only getting about 5W.
> Anybody around that has got one and give me some pointers??
> Thanks
> Gerard, ZL2GVA
> Blenheim, NZ

3447. Re: Want to build signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <39079C00.6CD1DE33@flash.net>
Source record: 61102

Hello.
Purchase the ARRL book "Solid State Design for the Radio Amateur". There
are several examples of homebrewed signal generators there; you can
scale the frequency to whatever you want; add other ranges, etc.
Steve AA7U

Rick Haub wrote:
>
> Subject pretty much says it all. I would like to build an signal
> generator that goes from about 30kHz to about 10MHz. Can anyone point me
> to a web site or mag article?
>
> Thanks,
>
> Rick KC0GIX

3448. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Steve Ratzlaff <sratzlaf@flash.net>
Message-ID: <39079E1A.26A7E7DF@flash.net>
Source record: 61103

Hello.
Yes, the volt-ampere rating (about the same as the wattage rating) of the transformer stays the same. That is, if you double the voltage out, for the same rating, the current must halve. You of course can't get something for nothing. You can add doublers, triplers, quadruplers, etc. to get any reasonable voltage, though the complexity of diodes and capacitors goes up fast too. Remember also, the doubled (tripled, etc.) ratings are based on a very light current draw. The voltage really sags under much more than light current draw.
Using back-to-back transformers to get isolated 115vac also works. Again remember the volt-ampere rating rule, and as you surmise, there are some losses, so your final output is not quite the same rating as the transformers (less).
I could also ask why you are contemplating building a tube superhet, when an equivalent solidstate version would be easier. (See aforementioned Solid State Design book for solidstate superhet circuits.)
Steve AA7U

Rick Haub wrote:
>
> I've recently come across a schematic for a fairly simple superhet
> receiver that I'd like to build. Unfortunately it is a British homebrew
> and requires 250v, easy to get in England, not so here. What I've got is
> a 1:1 lines isolating transformer rated at 50ma. I think I can just add
> a voltage doubler to get the 250v. But this got me thinking, will this
> half my current rating? I assume it will. Also just how high can I
> practicaly go? I like working with tubes but finding HV power
> transformers at a reasonable price is pretty tough. Can I just keep
> doubling until I get the voltage I want, halving the current as I go?
>
> I've seen line isolation using two 12 volt power transformers back to
> back. In other words the 12 volt output of one is run into ther 12 volt
> output of a second transformer thereby giving you your original 120v
> back but isolated. I assume there must be some line losses, I would not
> think that you get 120v back out but some thing a bit less. Any
> knowledge on this would be great.
>
> Thanks
>
> Rick KC0GIX

3449. looking for vacuum-tube based rcvr homebrew sites

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: joer@davesworld.net
Message-ID: <UGON4.227$jY2.11310@den-news1.rmi.net>
Source record: 61104

I'm looking for any sites that deal with homebrewing vacuum-tube based receivers, other than Harry's Homebrew site which I've seen (and enjoyed!). Anyone know of any out there?

thanks,

Joe W9TXU

3450. 2m glass on glass antenna plans wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Shaun & Annette <shaunannette@gatewaynet.bigpond.com>
Message-ID: <0tPN4.9654$E4.19806@newsfeeds.bigpond.com>
Source record: 61105

Does anyone know where I would find home brew plans for the above antenna??

Many thanks

Shaun

3451. Re: Vacuum tube down converters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000427010310.19372.00000789@ng-ch1.aol.com>
Source record: 61106

>> Hi folks;
>> Does anybody have a schematic for a simple vacuum tube
>>down converter? I'd like to try and build one for converting 50 MHz
>>signals down to 10 MHz so I can listen to any band openings using my short
>>wave radio. Arnie Coro, CO2KK has a transister model but I tend to fry
>>transisters. Because of my poor vision, I tend to melt my glasses and
>>burn my nose a lot too.
>
>Suggestion #1: Use machined pin IC socket pins. You can clip them out
>of a plastic dip socket frame and solder in the pin and then later plug
>in the transistor. They won't add that much stray capacitance used by
>themselves. You can get a handle on them by putting a 24 or 22 gauge
>solid wire in the socket part. Make sure the wire is small enough not
>to spread the insert.
>
>Suggestion #2: Go way back in time. Digging out the oldest Handbook
>I've got (1962), the 6 meter converter in the VHF Receivers chapter
>uses Nuvistor tubes, which would be just as much trouble as transistors.
>And a heck of a lot more expensive these days.
>
>Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State
>resident
>
>
>
>
>
>
>
>

I remember having a 6m converter that used a 6BE6 penta grid converter. I think the schematic came from a 60s issue of the ARRL handbook. I wasn't a ham at the time but there was 3 guys who talked locally on 6m AM. My intent was to add an RF stage one day but never did.

3452. Re: 2m glass on glass antenna plans wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: "David M. Brodbeck" <dmbrodbe@mtu.edu>
Message-ID: <8e9gt3bpd2@campus3.mtu.edu>
Source record: 61107

Shaun & Annette <shaunannette@gatewaynet.bigpond.com> wrote:
> Does anyone know where I would find home brew plans for the above antenna??

--> QST published some a while back. You might check the indexes. I think it was around ten years ago. They showed how to build both a straight antenna and a center loaded, "cell phone look" one. Sorry I can't be more specific about the issue; I photocopied the article, but I'm at college and it's at home.

David Brodbeck, N8SRE dmbrodbe@mtu.edu
finger gull@cyberspace.org for my public key block.

"Jazz musicians say only the most adoring things about one another; actors, generally the same. Only writers claw and spit, even though nobody cares but other writers, and public opinion of the attackee is affected not at all." -- Roger Rosenblatt

3453. Air spaced tuning cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Nigel Law <nigellaw@excite.co.uk>
Message-ID: <8e9kl1$14p$1@gxsn.com>
Source record: 61108

Has anybody built their own variable air spaced capacitors or know of
a site with info on constructing suh a thing. I am investigating
building magnetic loops and understand that tuning capacitors for
these can be hard to get particularly in the UK so I am looking at
building my own.
Any help would be real useful

Nigel, G0ADA

3454. Re: Only for discussion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e9o05$64f$1@nnrp1.deja.com>
Source record: 61109

In article <8e271b$5ah$1@plutonium.btinternet.com>,
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> It won't work. Just imagine what happens in the demodulator if one
> channel is unmodulated.
>
> What happens is that the pair of audio waveforms modulate each other.
> Better way is to allocate the single transmission path to each of the
> audio channels in turn. It's called Time Division Multiplex.
>
>

For sure it doesn't work. Even in a 'DC wire connected' system. This
because this method is extremely sensitive to the presence of
reactances, that is, if an even small capacitance exists a mixing
(intermodulation) will occur between the two channels, prior to
demodulation. When demodulated, both channels will contain S1 and S2,
although with different intensities.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3455. Re: Only for discussion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e9o14$64n$1@nnrp1.deja.com>
Source record: 61110

In article <8e271b$5ah$1@plutonium.btinternet.com>,
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> It won't work. Just imagine what happens in the demodulator if one
> channel is unmodulated.
>
> What happens is that the pair of audio waveforms modulate each other.
> Better way is to allocate the single transmission path to each of the
> audio channels in turn. It's called Time Division Multiplex.
>
>

For sure it doesn't work. Even in a 'DC wire connected' system. This
because this method is extremely sensitive to the presence of
reactances, that is, if an even small capacitance exists a mixing
(intermodulation) will occur between the two channels, prior to
demodulation. When demodulated, both channels will contain S1 and S2,
although with different intensities.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3456. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39085B6A.CD1226B3@midwestmicro-tek.com>
Source record: 61111

Steve Ratzlaff wrote:

> Hello.
> Yes, the volt-ampere rating (about the same as the wattage rating) of
> the transformer stays the same. That is, if you double the voltage out,
> for the same rating, the current must halve. You of course can't get
> something for nothing. You can add doublers, triplers, quadruplers, etc.
> to get any reasonable voltage, though the complexity of diodes and
> capacitors goes up fast too. Remember also, the doubled (tripled, etc.)
> ratings are based on a very light current draw. The voltage really sags
> under much more than light current draw.
> Using back-to-back transformers to get isolated 115vac also works. Again
> remember the volt-ampere rating rule, and as you surmise, there are some
> losses, so your final output is not quite the same rating as the
> transformers (less).

Thanks for the information. Would you have any idea how much current I could get out if I were to use two 12v out/2A transformers back to back? I had two 12v/450mA sitting in my junk box and hooked them up last night with a voltage doubler. I got about 300 volts out with only a 180k bleeder resister across the output, so I know I can draw at least 1.5mA with this configuration. It was late and I was too tired to do much more experimenting but I'll do somemore tonight. I only need about 50mA for this project but I've been looking at some transmitter designs that need up to 600v @ 200mA. More experimenting will tell the tale I think.

>
> I could also ask why you are contemplating building a tube superhet,
> when an equivalent solidstate version would be easier. (See
> aforementioned Solid State Design book for solidstate superhet
> circuits.)
> Steve AA7U
>

I'm reminded of Gonzo when he was ask why he was going to Bombay India to become and actor, he replied "Sure, if you want to do it the easy way".

Actualy (trying not to start the old hollow state/solid state debate) I was going to be a ham 25 years ago, when I was a kid, and collected a lot of tubes, HV caps, sockets and the like (didn't think to grab the transformers, to heavy, DOH!). So I got a lot of that stuff hanging around. And I design embedded controllers for a living and it's nice to go home and do something different. But the biggest reason, they're just so damn neat! I spent my entire adolencent and adult life getting degrees in the sciences and working with electronics and physics but I still stand in wonder at the orange glow of a electron tube.

Thanks for the help Steve, I'm going to look for that book on solid state design, sounds like it has some good test equipment.

Rick KC0GIX

> Rick Haub wrote:
> > I've recently come across a schematic for a fairly simple superhet
> > receiver that I'd like to build. Unfortunately it is a British homebrew
> > and requires 250v, easy to get in England, not so here. What I've got is
> > a 1:1 lines isolating transformer rated at 50ma. I think I can just add
> > a voltage doubler to get the 250v. But this got me thinking, will this
> > half my current rating? I assume it will. Also just how high can I
> > practicaly go? I like working with tubes but finding HV power
> > transformers at a reasonable price is pretty tough. Can I just keep
> > doubling until I get the voltage I want, halving the current as I go?
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> > back. In other words the 12 volt output of one is run into ther 12 volt
> > output of a second transformer thereby giving you your original 120v
> > back but isolated. I assume there must be some line losses, I would not
> > think that you get 120v back out but some thing a bit less. Any
> > knowledge on this would be great.
> >
> > Thanks
> >
> > Rick KC0GIX

3457. L.O.S.A Contribution Form

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: cjX@hth.com
Message-ID: <39086331.85310138@news.sverige.net>
Source record: 61112
Cross-posted to: comp.robotics.misc,comp.home.automation,sci.electronics.misc,rec.radio.amateur.homebrew

```
List Of Stamp Applications (L.O.S.A for short)
==============================================

If you have done something (big or small) with the BASIC Stamp
that you are willing to tell others please use the form below and
write a short description, nothing fancy is needed just a simple
explanation. If you have source code to share that's even better but
it's not necessary.

Then e-mail the form to:

cj@hth.com

With the following as the subject:

L.O.S.A Contribution

Or you could point your Web-browser to the following URL and fill
in the L.O.S.A form on the Web-page...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###

http://www.hth.com/losa/

The latest version of L.O.S.A is always available at the above
mentioned both in ASCII and in ZIP-file format for easy download.
An index of L.O.S.A is posted to the following mailing lists and
news groups, I will update it approx. once a month.

Mailing lists:

BASIC Stamp Mailing List

News groups:

comp.robotics.misc
comp.home.automation
sci.electronics
sci.electronics.misc
rec.radio.amateur.homebrew

FTP-site:

ftp://ftp.parallaxinc.com/pub/text/losa.txt

You can also find the latest version on the following URL...

### OBSERVE! NEW URL - UPDATE YOUR LINKS AND BOOKMARKS ###
```

http://www.hth.com/losa/

[--- cut ---]

```
========================================================================
- L.O.S.A Contribution Form -
========================================================================
New Contribution [ ] Update [ ]
------------------------------------------------------------------------

Title :
Author: Date:

E-mail: (optional)
------------------------------------------------------------------------

Stamp model : BASIC Stamp/BS1-IC/BS2-IC/BS2SX-IC
Code available: YES/NO
Filename : (optional)
URL : (optional)
------------------------------------------------------------------------
Description : (5-50 rows describing your application)

========================================================================
```

[--- cut ---]

Regards,

/Christer

[NOTE: Clear the "X" from my e-mail address if you want to e-mail me]

```
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
* High Tech Horizon - Christer Johansson - E-mail: cj@hth.com *
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
Send and receive serial data over the power lines... For more info
about the PLM-24 Power Line Modem go to http://www.hth.com/plm-24/
-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-=-
```

3458. Re: Wanted: Amperex 8163

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e9rmhahr1@nnrp1.deja.com>
Source record: 61113

In article <20000426172009.03343.00000918@ng-fe1.aol.com>,
qroking@aol.com (QRO KING) wrote:
> Hi, I need at least one or more Amperex 8163's, must be known good and
full
> output. e-mail me if you have any to sell...73 Lou
>

Contact people here http://www.sky95.com/skytub.htm
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3459. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: py1ll@my-deja.com
Message-ID: <8e9skq$bl6$1@nnrp1.deja.com>
Source record: 61114

In article <39085B6A.CD1226B3@midwestmicro-tek.com>,
rhaub@midwestmicro-tek.com wrote:
>
>
> Steve Ratzlaff wrote:
>
> > Hello.
> > Yes, the volt-ampere rating (about the same as the wattage rating)
of
> > the transformer stays the same. That is, if you double the voltage
out,
> > for the same rating, the current must halve. You of course can't get
> > something for nothing. You can add doublers, triplers, quadruplers,
etc.
> > to get any reasonable voltage, though the complexity of diodes and
> > capacitors goes up fast too. Remember also, the doubled (tripled,
etc.)
> > ratings are based on a very light current draw. The voltage really
sags
> > under much more than light current draw.
> > Using back-to-back transformers to get isolated 115vac also works.
Again
> > remember the volt-ampere rating rule, and as you surmise, there are
some
> > losses, so your final output is not quite the same rating as the
> > transformers (less).
>
> Thanks for the information. Would you have any idea how much current I
could
> get out if I were to use two 12v out/2A transformers back to back? I
had two
> 12v/450mA sitting in my junk box and hooked them up last night with a
voltage
> doubler. I got about 300 volts out with only a 180k bleeder resister
across
> the output, so I know I can draw at least 1.5mA with this
configuration. It
> was late and I was too tired to do much more experimenting but I'll do
> somemore tonight. I only need about 50mA for this project but I've
been
> looking at some transmitter designs that need up to 600v @ 200mA. More
> experimenting will tell the tale I think.
>
> >

> > I could also ask why you are contemplating building a tube superhet,
> > when an equivalent solidstate version would be easier. (See
> > aforementioned Solid State Design book for solidstate superhet
> > circuits.)
> > Steve AA7U
> >
>
> I'm reminded of Gonzo when he was ask why he was going to Bombay India
to
> become and actor, he replied "Sure, if you want to do it the easy
way".
>
> Actualy (trying not to start the old hollow state/solid state debate)
I was
> going to be a ham 25 years ago, when I was a kid, and collected a lot
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> tubes, HV caps, sockets and the like (didn't think to grab the
transformers,
> to heavy, DOH!). So I got a lot of that stuff hanging around. And I
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> different. But the biggest reason, they're just so damn neat! I spent
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working
> with electronics and physics but I still stand in wonder at the orange
glow of
> a electron tube.
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> Thanks for the help Steve, I'm going to look for that book on solid
state
> design, sounds like it has some good test equipment.
>
> Rick KC0GIX
>
> >
> > Rick Haub wrote:
> > >
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> > > think that you get 120v back out but some thing a bit less. Any
> > > knowledge on this would be great.
> > >
> > > Thanks
> > >
> > > Rick KC0GIX
>
>

Remember that, for a tube radio, there is a filament current to be
supplied. If you rewire the filament circuit (or replace its tubes for
equivalent ones but with suitable filament voltage), you will need a
much smaller current for the +B supply.
--
Greetings,

Luiz - PY1LL

Sent via Deja.com http://www.deja.com/
Before you buy.

3460. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8e9sssrtm1@ausnews.austin.ibm.com>
Source record: 61115

In <39085B6A.CD1226B3@midwestmicro-tek.com>, Rick Haub <rhaub@midwestmicro-tek.com>
writes:
>
>
>Steve Ratzlaff wrote:
>
>> Hello.
>> Yes, the volt-ampere rating (about the same as the wattage rating) of
>> the transformer stays the same. That is, if you double the voltage out,
>> for the same rating, the current must halve. You of course can't get
>> something for nothing. You can add doublers, triplers, quadruplers, etc.
>> to get any reasonable voltage, though the complexity of diodes and
>> capacitors goes up fast too. Remember also, the doubled (tripled, etc.)
>> ratings are based on a very light current draw. The voltage really sags
>> under much more than light current draw.
>> Using back-to-back transformers to get isolated 115vac also works. Again
>> remember the volt-ampere rating rule, and as you surmise, there are some
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>get out if I were to use two 12v out/2A transformers back to back? I had two
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>doubler. I got about 300 volts out with only a 180k bleeder resister across
>the output, so I know I can draw at least 1.5mA with this configuration. It
>was late and I was too tired to do much more experimenting but I'll do
>somemore tonight. I only need about 50mA for this project but I've been
>looking at some transmitter designs that need up to 600v @ 200mA. More
>experimenting will tell the tale I think.
>

Since the secondary is rated at 12 volts at 2 amps, that represents
24 watts. If the transformer has a 120 volt primary, then the turns
ratio is 10:1. Thus, since the current goes as the inverse of the
turns ratio, the primary current would be 2/10, or .2 amps (200
milliamps). Therefore, if we negelect losses, you would have 200
milliamps flowing in the primary of the first transformer, 2 amps
flowing in the secondary of the first transformer, 2 amps flowing in
the primary (low-volage) side of the second transformer, and 200
milliamps flowing in the secondary (high-voltage) side of the second
transformer. Note that the power is conserved at each step. 120
volts at .2 amps in the primary of the first transformer is 24
watts, which is the same as 12 volts at 2 amps in the secondary of
the first transformer, and this is the same as the 120 volts at .2

amps in the secondary of the second transformer.

Now, what you'll have to pay attention to is the losses. While large transformers can be extremely efficient (>99 percent), small transformers aren't nearly as efficient. Thus, what you may find is that at maximum load, the output voltage sags. Plus, the transformers may get rather warm. Part of this heating may come from magnetizing losses (eddy currents, etc.), and part will come from ohmic heating of the windings.

In any case, the 12 volt-2 amp transformers won't even come close to supplying power for the 600 volt-200 milliamp transmitter design. The transmitter requires a power of 120 watts (600 volts times .2 amps), which is well in excess of the 24 watt capacity of the transformers. An attempt to pull this much power from the transformers will result in excessive currents, and this excessive current may lead to a thermal meltdown (e.g., It's no fun to have pools of molten copper flowing about.).

Also, note that the voltage on the output from the second transformer will be about 120 volts RMS. When you rectify the sine wave output, the actual DC voltage will peak at about 170 volts. In actuality, the voltage will be slightly below this due to losses in the transformers, and inefficiencies in the rectifier and filter assembly.

Are you using a half-wave or a full-wave voltage doubler?

I'll also offer a cautionary note about an approach that some people have taken which is not entirely safe. An approach similar to the one you're persuing (e.g., using two transformers back to back) can be used to step up the voltage to a value above the input value. Consider the case where the first transformer is a 120 volt to 12 volt transformer, and the second transformer is a 120 volt to 6 volt transformer. If the second transformer is connected (in the reverse direction) to the output of the first transformer, the output voltage will be approximately 240 volts. But, this is VERY dangerous! The problem is that the second transformer may be driven into magnetic saturation, at which point the losses in the core will be significantly higher than normal, resulting in a dramatically higher heating. Additionally, the 240 volts developed on the secondary may exceed the insulation rating of the transformer, resulting in dangerous electrical leakage.

>>
>> I could also ask why you are contemplating building a tube superhet,
>> when an equivalent solidstate version would be easier. (See
>> aforementioned Solid State Design book for solidstate superhet
>> circuits.)
>> Steve AA7U
>>
>

>I'm reminded of Gonzo when he was ask why he was going to Bombay India to
>become and actor, he replied "Sure, if you want to do it the easy way".
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>Actualy (trying not to start the old hollow state/solid state debate) I was
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>to heavy, DOH!). So I got a lot of that stuff hanging around. And I design
>embedded controllers for a living and it's nice to go home and do something
>different. But the biggest reason, they're just so damn neat! I spent my
>entire adolencent and adult life getting degrees in the sciences and working
>with electronics and physics but I still stand in wonder at the orange glow of
>a electron tube.
>
>Thanks for the help Steve, I'm going to look for that book on solid state
>design, sounds like it has some good test equipment.
>
>Rick KC0GIX

Orange glow? I hope you meant dull red glow. The filament/heater
in most 'modern' vaccum tubes only reaches red hot temperatures. On
some of the older tubes, it reached a yellow level of incandescence.
Of course, if you're working with gas-filled tubes, such as some of
the voltage regulator tubes, these can produce a quite vivid glow.
Some of the gaseous voltage regulator tubes are filled with Neon,
and emit the characteristic Neon-orange glow while in operation.
Others (0C3?) are filled with Argon, and emit the characteristic
purple glow of Argon. And, then there's the blue glow of the
envelope of some vaccum tubes where it's struck by electrons. And,
of course, this is different from the blue glow of a mercury vapour
rectifier in operation. And, then, there's the cherry red glow from
the anode of a heavily loaded power tube.

You know, that's the problem with modern electronics: There isn't nearly
enough colour associated with it. :*)

>
>
>>
>> Rick Haub wrote:
>> >
>> > I've recently come across a schematic for a fairly simple superhet
>> > receiver that I'd like to build. Unfortunately it is a British homebrew
>> > and requires 250v, easy to get in England, not so here. What I've got is
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>> > back but isolated. I assume there must be some line losses, I would not
>> > think that you get 120v back out but some thing a bit less. Any
>> > knowledge on this would be great.
>> >
>> > Thanks
>> >
>> > Rick KC0GIX
>

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3461. Re: looking for vacuum-tube based rcvr homebrew sites

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39089DBC.1D5D9010@midwestmicro-tek.com>
Source record: 61116

I'm sure you've already gotten this one

http://www.qsl.net/n6ev/Glowbug.html

Lots of good stuff. Also if you happen to be near a good library or better yet,
a good engineering library, check out old QST mags and old ARRL Radio Amateur
Handbooks. Anything earlier than 1969 is good.

Rick KC0GIX

Joe L. Reda wrote:

> I'm looking for any sites that deal with homebrewing vacuum-tube based
> receivers, other than Harry's Homebrew site which I've seen (and enjoyed!).
> Anyone know of any out there?
>
> thanks,
>
> Joe W9TXU

3462. VOX Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: justindd@iastate.edu
Message-ID: <8eaguu$2oi$1@news.iastate.edu>
Source record: 61117

Please email me (ki0ob@arrl.net) if you have a diagram for a vox circuit that can be connected to any audio sorce (mic, tnc, etc)....I don't need one perfectly for any special radio, just need to have wires PTT, MIC, GRND and I can deal with the rest, but I am using a HTX-202 if someone already has something that uses the 2.2k resistor in the keyline....

TNX
KI0OB

3463. Re: VOX Schematic

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8eas9atbb1@ins21.netins.net>
Source record: 61118

```
-----BEGIN PGP SIGNED MESSAGE-----

Actually, I have a HTX-202 also--post the schematic here?

or email k0ees@arrl.net

- --
```

*Brendan K Callahan K&#65533;EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

```
"Justin D Davis" <justindd@iastate.edu> wrote in message
news:8eaguu$2oi$1@news.iastate.edu...
> Please email me (ki0ob@arrl.net) if you have a diagram for a vox
> circuit that can be connected to any audio sorce (mic, tnc,
> etc)....I don't need one perfectly for any special radio, just
> need to have wires PTT, MIC, GRND and I can deal with the rest,
> but I am using a HTX-202 if someone already has something that
> uses the 2.2k resistor in the keyline....
>
> TNX
> KI0OB

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

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3464. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Mike Silva <mjsilva@jps.net>
Message-ID: <ix6O4.818$Nx3.124558@nntp3.onemain.com>
Source record: 61119

(posted this earlier but it didn't seem to escape my ISP black hole...)

Rick,

You really shouldn't need more than 150V or so to run a tube receiver. The only stage where higher voltage matters is the audio output. Unless you're trying for PP 6V6s or more, you can pick an output tube that will provide decent output at a lower voltage (e.g. 6W6, 6Y6, 6CU5). The tradeoff is that these tubes need more heater power, since they need to heat a bigger cathode to produce the same plate current at lower plate and screen voltages. That's not a big deal, though, since filament transformers aren't scarce. I've got a 1:1 isolation transformer PS (capacitor input) that provides about 160V with a fairly heavy load. The transformer, BTW, is actually a dual-primary job so it can be hooked up backwards to give 250V if you want. I'm pretty sure it's the 50VA one that All Electronics has:

http://www.allelectronics.com/pdfcat.html

though I got mine locally.

One way to save on power transformer and choke costs is to build your rigs without power supplys and built a couple of separate power supplies to run your rig-of-the-week. I use the 8-pin Jones connectors for this -- I think they're good up to 750V. I also always provide 12.6VCT for heaters, so I can use both 6V and 12V tubes (as well as the cheap but high-performing TV series-string oddballs: e.g. a 4AU6 and an 8CG7 in series).

>> I could also ask why you are contemplating building a tube superhet,
>> when an equivalent solidstate version would be easier. (See
>> aforementioned Solid State Design book for solidstate superhet
>> circuits.)
>> Steve AA7U
>>
>I'm reminded of Gonzo when he was ask why he was going to Bombay India to
>become and actor, he replied "Sure, if you want to do it the easy way".
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>entire adolencent and adult life getting degrees in the sciences and
working
>with electronics and physics but I still stand in wonder at the orange glow
of
>a electron tube.

You've got the fever! Same with me -- cutting edge (well, scraping edge?) electronics in the day, and high voltage high temperature *pretty* electronics at night!

(Oh, and did I mention the wonderful *smell*?!)

73,
Mike, KK6GM

3465. Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Grace Cunningham <johngrac@surfsouth.com>
Message-ID: <3908F7D8.A99@surfsouth.com>
Source record: 61120

I've been shopping for my first rig and wondered if the K2 would be a good starter radio. I've built QRP rigs before, so building the radio should be fun. What is the difference between the K2 and starter rigs like the Alinco DX-77, Icom 707,Yaesu FT-840 and Kenwood's TS-50?; (other than those rigs have 100 watts) As you can tell I am some what new to hf. Please email me or post to the group what you know. Many thanks, KE4QOP John

3466. Re: 10 GHz question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Brian Yee <surfgurl@dnai.com>
Message-ID: <390922D9.1AF3684C@dnai.com>
Source record: 61121

Brian,

Yes, it is possible to do full duplex down the same coax. With most
gunnplexers
the other station is offset by about 30 Mhz (or sometimes 10.7 Mhz,
depending
on what IF receiver you are using).

73, Brian W6BY

Brian Bennett wrote:

> Hi all,
> I have a couple of old 10.515 GHz Gunnplexers I'm about to experiment
> with. There's a few articles around on biasing the Gunn diode and
> modulating it through a '317 on one wire and receiving through a
> separate coax from the detector diode. My question is, is it not
> possible to bias/transmit (voice..LF) to the Gunn diode and also
> receive (cap coupling to the receiver/detector diode) off the same
> coax?
> Also, (more annoying questions..) are there any folks in B.C. or
> Washington State on 10GHz? (& if so which freq. and polarity?)
> ;) Thanks in advance!
>
> 73's
> '7IJQ

3467. New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ea690$11d$1@neptunium.btinternet.com>
Source record: 61122

SOLNOID2.exe is an updated and improved version of successful program Solenoid.exe which it now replaces.

Computed inductance is more accurate for coils with small length/diameter ratio.

Any number of turns from 1 upwards.

Covers single turns from a loop to a straight wire

Frequency range 1 KHz to 1 GHz.

Output data :- inductance, reactance, impedance at resonance, Q when in parallel resonance, Q when in series resonance, self-capacitance, self-resonant frequency, capacitance to resonate at test frequency, watts dissipated for given RF volts across coil, wire diameter, wire length.

Facilities for fast sweeps in small increments of :- test frequency, coil length, coil diameter, ratio of wire diameter to winding pitch, number of turns, while observing tabled output data.

Self-resonant frequency of solenoids or helices is accurate enough for analysis of home-brewed slinky antennas.

AVAILABLE NOW FROM WEBSITE BELOW. Only 43 kbytes. Download in a few seconds. No self-respecting, do-it-yourself coil-winder, professional or amateur, should be without it.
--
Reg. G4FGQ
==========
Free radio design software -
http://www.btinternet.com/~g4fgq.regp
==========

3468. eBay: 1957 Transistors Handbook, by William Bevitt

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: oldbooks78@aol.com
Message-ID: <20000427225243.10741.00000147@ng-bj1.aol.com>
Source record: 61123

I currently have up for auction at eBay a nice copy of the "Transistors Handbook" by William Bevitt, published in 1957. The 410 page hardbound book is in very good condition, clean with no page tears or pen marks other than a previous owners name inside the front cover, and a strong binding. Everything you could ever want to know about transistors. Opening bid is $8. Auction closes 5/2/00. Thanks.

Dave

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=317528777

3469. Re: Air spaced tuning cap's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <n57O4.6910$26.227877@typhoon2.gnilink.net>
Source record: 61124

This group has air variables: http://www.midnightscience.com/
Otherwise, I have some miniature, poly-film variables, @ 266 pf. x 2.
Ed W., K3FDY.

Nigel Law wrote in message <8e9kl1$14p$1@gxsn.com>...
>Has anybody built their own variable air spaced capacitors or know of
>a site with info on constructing suh a thing. I am investigating
>building magnetic loops and understand that tuning capacitors for
>these can be hard to get particularly in the UK so I am looking at
>building my own.
>Any help would be real useful
>
>Nigel, G0ADA
>

3470. Serial Mouse.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <Pk7O4.6688$J5.274367@typhoon1.gnilink.net>
Source record: 61125

I need to free-up IRQ-12 on my computer so as to install a Zip Drive without a conflict. IRQ-12 was being used by my serial mouse, so I installed a parallel port mouse which does not need IRQ-12. After physically removing the serial mouse, I went to Device Manager and deleted the serial mouse driver. After re-booting the computer, (an HPVectra VA with a Pentium Pro processor), it keeps re-installing the missing serial mouse along with IRQ-12? Does anybody have an idea why I can't get rid of the serial mouse port on Device Manager, and is threre something else that needs to be done, like a jumper somwhere? Tnx, Ed W., K3FDY

3471. Re: Serial Mouse.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "Ed W." <edek@mail.gcnet.net>
Message-ID: <zX7O4.7088$26.231815@typhoon2.gnilink.net>
Source record: 61126

I probably should add that the op. system is Win. 98 and the mouse is a PS-2
type.
Ed W.

Ed W. wrote in message ...
>I need to free-up IRQ-12 on my computer so as to install a Zip Drive
without
>a conflict. IRQ-12 was being used by my serial mouse, so I installed a
>parallel port mouse which does not need IRQ-12. After physically removing
>the serial mouse, I went to Device Manager and deleted the serial mouse
>driver. After re-booting the computer, (an HPVectra VA with a Pentium Pro
>processor), it keeps re-installing the missing serial mouse along with
>IRQ-12? Does anybody have an idea why I can't get rid of the serial mouse
>port on Device Manager, and is threre something else that needs to be done,
>like a jumper somwhere? Tnx, Ed W., K3FDY
>
>

3472. WTB for Kenwood & Yaesu...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <39092FCD.7FDF@silverstar.com>
Source record: 61127

Need scan mod kit for Yaesu FT-227R Memorizer.

Need schematic for Kenwood VOX-1.

3473. Ham parts...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <3909302C.3411@silverstar.com>
Source record: 61128

Found catalog with lots of ham parts and many Collins items.

Website for Surplus Sales of Nebraska is

http://www.surplusales.com

3474. Simple superhets (was Re: Voltage doubling, How high can I go?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Mike Silva <mjsilva@jps.net>
Message-ID: <hpeO4.1776$yg5.157549@nntp3.onemain.com>
Source record: 61129

Steve Ratzlaff wrote in message <39079E1A.26A7E7DF@flash.net>...

>I could also ask why you are contemplating building a tube superhet,
>when an equivalent solidstate version would be easier. (See
>aforementioned Solid State Design book for solidstate superhet
>circuits.)
>Steve AA7U

Just as a general FYI on simple tube superhets, the simplest design (for HF) consists of a converter tube (6K8, 6SA7, 6BE6) driving a regenerative detector and audio amplifier. These latter two stages were usually combined as a single dual-triode (6C8G, 6SN7, 12AU7) so the whole rig used two tubes. This format was in radio handbooks from the mid '30s to the end of the '40s or beyond. One of the members of the glowbugs list, Baz ZL1DD, says they were an excellent and popular improvement to the classic regen, since they avoided all the problems of connecting the detector directly to the antenna. Frank Jones W6AJF called these "super gainers," an extension of his term "gainers" for regens (in particular, a detector and one stage of audio).

For cheap BC reception manufacturers would sometimes produce a stripped-down All American 5 radio without an IF stage -- just a converter going through an IF transformer to the (envelope) detector. Don't know how popular those were, given how much gain and selectivity were lost in leaving out the IF tube and second transformer.

OTs and others, feel free to correct any of the above...

73,
Mike, KK6GM

3475. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <39097350.C7A00D5C@bellsouth.net>
Source record: 61130

Grace Cunningham wrote:

> I've been shopping for my first rig and wondered if the K2 would be a
> good starter radio. I've built QRP rigs before, so building the radio
> should be fun. What is the difference between the K2 and starter rigs
> like the Alinco DX-77, Icom 707,Yaesu FT-840 and Kenwood's TS-50?;
> (other than those rigs have 100 watts) As you can tell I am some what
> new to hf. Please email me or post to the group what you know. Many
> thanks, KE4QOP John

One difference is that the K2 is pretty much ham band only- with small excursions above and below each band. However, the major difference is that the K2's receiver is in a league of its own. None of the receivers you mentioned have specs to compare with the K2. In addition, if you have ANY interest in portable operation, the K2 will draw AMPERES less on RX. In its battery save mode, receive current can be well below 200mA! The internal battery makes portable operation a snap. The NB is the best I have used- reminiscent of the Drake 4 line's NB.
Finally, the QSK is silky smooth- so much so that I sold my Omni VI+ after running the K2 for a month. I should add, I only work CW, but the guys running SSB are getting rave audio reviews.
The Elecraft support is as good as their receiver. 100W PA is a planned option as is a 6M transverter- stay tuned- these 2 West coast engineers, are showing the off-shore guys how to design RF gear the right way. I have no affiliation with Elecraft other than buying everything they design.

Dale W4OP

3476. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Bis_Wichy@webtv.net
Message-ID: <12907-39098F3D-3@storefull-164.iap.bryant.webtv.net>
Source record: 61131

This was done many times in the early 70's. Many counter culture magazines had homebuilt projects. It's a lot of work to say the least!

Today you can buy a unit - blades and built in inverter controller for less than $600. Just add a battery and a pole and it's done. A Microcomputer (of course) controls everything.

Even has a shutdown governer for high winds.

You might consider solar - again you can buy units already pre-built that includes everything including the paper work for the building inspector. Technology has taken off and prices have dropped considerably since the 70's.

Suggest you buy Homepower magazine. It comes out once every two months. You can read about all the latest and greatest. Stuff the power company would rather not have you know.

With QRP wind/solar power is a natural (pun intended)... and not just for field day only....

Now if someone would only come up with a solar powered motorcycle!!!!

3477. Re: Serial Mouse.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: John Ireland <ja4ir4@harborside.com>
Message-ID: <f2iO4.2188$F.67999@news4.giganews.com>
Source record: 61132

Ed,
Device manager won't remove it. Each time you boot Plug and Play locates all the connected devices. You will need to go into the bios and disable the PS2 mouse port, and then the PS2 port won't be active at boot, and you should have your IRQ 12 back.

john

Ed W. wrote in message ...
>I probably should add that the op. system is Win. 98 and the mouse is a PS-2
>type.
>Ed W.
>
>Ed W. wrote in message ...
>>I need to free-up IRQ-12 on my computer so as to install a Zip Drive
>without
>>a conflict. IRQ-12 was being used by my serial mouse, so I installed a
>>parallel port mouse which does not need IRQ-12. After physically removing
>>the serial mouse, I went to Device Manager and deleted the serial mouse
>>driver. After re-booting the computer, (an HPVectra VA with a Pentium Pro
>>processor), it keeps re-installing the missing serial mouse along with
>>IRQ-12? Does anybody have an idea why I can't get rid of the serial mouse
>>port on Device Manager, and is threre something else that needs to be
done,
>>like a jumper somwhere? Tnx, Ed W., K3FDY
>>
>>
>
>

3478. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: John Buck <kh7t@arrl.net>
Message-ID: <3909D835.22F3862D@arrl.net>
Source record: 61133

The main differences.
A better receiver. excellent selectivity and blocking range.
excellent human interface.
Compact complete station, wide range antenna tuner, swr and power
monitoring, Battery included option.
10 to 15 watts output vs 100
Not general coverage receiver but is ham bands plus.
You built it and you can trouble shoot and fix it.
Price is similar to the pre built stuff if you include all the options.
This gives you a far better rig.
Coverage does not include 6 meters, I am not sure on the other radios.

Note that the basic price is a cw radio, 80 - 10 meters.
Options include ssb, auto tuner, 160 meters, battery etc.

The 15 watts will not drive FCC compliant QRO amplifiers to full
output. My SB220 needs about 40 watts drive for full output. So my
maximum signal may drop to about 400 watts while using my K2 to drive
the Amplifier.

A good antenna is a far better investment than a power amplifier. I
have both but enjoy the antenna more than the amplifier. The amplifier
is usually off except when attempting to crush a large pile up on a rare
DX station.
Even then I usually stay in the "low" power amplifier setting.

My K2 is in the mail, my current radio is a TenTec Omni VI. I expect
the K2 to perform as well as the OMNI except for the 6 db less signal.
1 S unit.

73,
John KH7T

3479. Re: looking for vacuum-tube based rcvr homebrew sites

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Darrell Brooks <wa5vgo@mindspring.com>
Message-ID: <8ecohn$j9o$1@slb2.atl.mindspring.net>
Source record: 61134

Check Out : http://www.inetport.com/~talen/

3480. Re: ISO - PE/IE QRP Rig Article

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "Cestyll O. Dywod, esq." <willi6@erols.com>
Message-ID: <390A1776.421D6069@erols.com>
Source record: 61135

Thanks for the responses. I'll E-Mail direct. 73, Dave K7HMP

Fuzzy or Shirley Duenkel wrote:

> The issue was August 1965, written by Hartland B. Smith, who wrote many
> articles about QRP rigs. I have the issue. Do you want me to photocopy it
> and send it to you?
>
> Fuzzy

3481. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "Cestyll O. Dywod, esq." <willi6@erols.com>
Message-ID: <390A19B8.F4787004@erols.com>
Source record: 61136

Contact the following for a catalog of books on all "old" electronics topics. Their typical catalog will have numerous early books on spark technology (do those two words go together). Some are the do-it-yourself type for youngsters, hams, and Scouts. Others are the engineering or theoretical type for ship and shore stations. And some are historical or other themes. Good company, great books!

New Wireless Pioneers
Box 398
Elma, NY
14059

PH: (716) 681-3186

Or, try:

http://www.marconi-wireless.com

not sure if web page is up yet.

73, Dave K7HMP

Fritz Sonnichsen wrote:

> I am working with an engineering department here, and we are trying to
> develop, for the lab, a Marconi or spark sending unit for demonstration
> purposes. We have sucessfully built a coherer and transmitted high voltage
> sparks generated signals across a few feet. We would be interested in
> hearing from anyone who has either theoretical information or practical
> experience in building, early Marconi or spark sending units.
>
> Cheers
> Fritz (AA2OP)

3482. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8gk8jm.j56.X@animas.frontier.net>
Source record: 61137

On Sat, 29 Apr 2000 00:24:26 +0100, Ian Jackson scribbled:
>In article <3907662c.3462250@news.corecomm.net>, jyazel@core.com writes
>>On Tue, 25 Apr 2000 14:12:49 -0400, Jeff VE3NVY <aj713@hwcn.org> wrote:
>>
>>>remember th egoo dol ddays when every electronic stor ein the country had
>>>a heathkit product on their shelf where every radio enthisiat had a
>>>project half finishe dsitting on his desk and half the radios on th
>>>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>>>there is a new comapny starting up in hamilton ontario an dthey will ahve
>>>kits for everything from kits gor you rkids (like a simple blinky flasher
>>>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>>>home an daccesorcies be it a dsp or even an antennae tuner it will be
>>>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>>>word aroun d finally the ol dwill b enew again wouldnt you all like a
>>>kit to say i built it myself
>>
>> What language is this in?
>>
>It sure ain't English, but I like it! It's a pretty good way of 'coding'
>a message. It's surprising what a 'space in the wrong place' will do.

My guess would've been he was an RTTY operator.
But, then, it was *not* in all CAPS.

3483. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Robert Fanfant <fanfant@ix.netcom.com>
Message-ID: <390a35ef@news.microsoft.com>
Source record: 61138

QST did a technical review of this radio a couple of months ago...Bottom line was that the K2 had performance numbers of rigs in the $2000 - $3500 range. Worth checking out.

-rob N7QT

"Grace Cunningham" <johngrac@surfsouth.com> wrote in message news:3908F7D8.A99@surfsouth.com...
> I've been shopping for my first rig and wondered if the K2 would be a
> good starter radio. I've built QRP rigs before, so building the radio
> should be fun. What is the difference between the K2 and starter rigs
> like the Alinco DX-77, Icom 707,Yaesu FT-840 and Kenwood's TS-50?;
> (other than those rigs have 100 watts) As you can tell I am some what
> new to hf. Please email me or post to the group what you know. Many
> thanks, KE4QOP John

3484. Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <390A60DA.8AF23F0C@azstarnet.com>
Source record: 61139
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Hi to all:

I have begun experimenting with some homemade (point contact)
transistors. Transistor action, while perfectly evident through current
measurements, has become troublesome and tedious to with multiple meters
and power supplies.

What I'm really looking for is a curve tracer, specifically the modular
type that can be connected to a common o-scope to to display curve
families.

Anyone out there have one collecting dust in their ham shack or storage
closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
my address to email.

BTW, if you'd like to see a few pictures, check out these URLs:

http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif

The last URL is a photomicrograph of the electrodes in the transistor
shown in the first URL. If you are patient enough, look at 'em all.

Thanks in advance.

Pete

3485. Tuning knob drag adjustment on FT-102?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: "a.p." <apight@pa.net>
Message-ID: <3909C226.764F724@pa.net>
Source record: 61140

Any one have the instructions on adjusting the tuning knob?
TIA
Art

3486. Re: Voltage doubling, How high can I go?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-28 00:00:00 UTC
From: Alan Melia <Alan.Melia@btinternet.com>
Message-ID: <8eama3$4am$1@uranium.btinternet.com>
Source record: 61141

An easier way would be to get two 115v 1:1 transformers and connect the
primaries in parallel and the secondaries in series (right phase of course)
and then you have 115v in and 230v centre tapped out. Just put a bridge
across the 230v bit and some reservoir caps and enjoy some real tube radio!!
Cheers de Alan G3NYK
Rick Haub wrote in message <3907637A.230324AF@midwestmicro-tek.com>...
>I've recently come across a schematic for a fairly simple superhet
>receiver that I'd like to build. Unfortunately it is a British homebrew
>and requires 250v, easy to get in England, not so here. What I've got is
>a 1:1 lines isolating transformer rated at 50ma. I think I can just add
>a voltage doubler to get the 250v. But this got me thinking, will this
>half my current rating? I assume it will. Also just how high can I
>practicaly go? I like working with tubes but finding HV power
>transformers at a reasonable price is pretty tough. Can I just keep
>doubling until I get the voltage I want, halving the current as I go?
>
>I've seen line isolation using two 12 volt power transformers back to
>back. In other words the 12 volt output of one is run into ther 12 volt
>output of a second transformer thereby giving you your original 120v
>back but isolated. I assume there must be some line losses, I would not
>think that you get 120v back out but some thing a bit less. Any
>knowledge on this would be great.
>
>Thanks
>
>Rick KC0GIX
>

3487. Re: Serial Mouse.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Christopher An <christopher_an@sympatico.ca>
Message-ID: <390A795C.CDAF0091@sympatico.ca>
Source record: 60995

Hi Ed,

To me, the "serial mouse" really is a PS2 type mouse because serial mouse does not have own IRQ assigned and it just use whatever IRQ assigned to your Com port (IRQ 3 and 4). And the Zip drive you have looks like a SCSI version because if you have Parallel port Zip drive, you don't have to free-up IRQ12. Also, there is no 'parallel mouse' and all mice are either serial or bus. What you meant 'serial mouse' really means a 'bus mouse', and what you meant 'parallel mouse' really means a 'serial mouse'. The reason why I say like this is, most brand name PCs use bus mouse, which is also called PS2 type mouse. OK. Let's get clear from now.

You can disable the PS2 mouse port from the BIOS setting. Check the manual and it will list stuffs in BIOS and you can easily change the setting. Next time you delete the device and reboot, you won't see it any more. The Zip drive might come with an interface card, which is a simple SCSI adapter. From Device Manager, high-light the icon 'Computer' then click on Properties, and it will list the IRQs in your computer. Make sure IRQ 12 is now free (not listed). If you don't see IRQ 12, it is the time you can install the Zip drive adapter in your PC and install software for the Zip drive.

I hope this helps and please send me an e-mail if you have any question. 73,

Christopher VE3UVT

"Ed W." wrote:

> I need to free-up IRQ-12 on my computer so as to install a Zip Drive without
> a conflict. IRQ-12 was being used by my serial mouse, so I installed a
> parallel port mouse which does not need IRQ-12. After physically removing
> the serial mouse, I went to Device Manager and deleted the serial mouse
> driver. After re-booting the computer, (an HPVectra VA with a Pentium Pro
> processor), it keeps re-installing the missing serial mouse along with
> IRQ-12? Does anybody have an idea why I can't get rid of the serial mouse
> port on Device Manager, and is threre something else that needs to be done,
> like a jumper somwhere? Tnx, Ed W., K3FDY

3488. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <390ae999.85811579@news.erols.com>
Source record: 60996

Anyone interested in Marconi's rigs needs to get a copy of Peter R.
Jensen's truly excellent book "In Marconi's footsteps: Early Radio."
Jensen is a ham (Vk4AQJ and G4GZT). In his book he visits all of
Marconi's transmitter sites and describes in detail the construction
of replica equipment. Published by Kangaroo press in 1994.

73 Bill N2CQR
http://www.erols.com/wmeara

On Fri, 28 Apr 2000 19:07:36 -0400, "Cestyll O. Dywod, esq."
<willi6@erols.com> wrote:

>Contact the following for a catalog of books on all "old" electronics topics.
>Their typical catalog will have numerous early books on spark technology (do
>those two words go together). Some are the do-it-yourself type for
>youngsters, hams, and Scouts. Others are the engineering or theoretical type
>for ship and shore stations. And some are historical or other themes. Good
>company, great books!
>
>New Wireless Pioneers
>Box 398
>Elma, NY
>14059
>
>PH: (716) 681-3186
>
>Or, try:
>
> http://www.marconi-wireless.com
>
>not sure if web page is up yet.
>
>73, Dave K7HMP
>
>
>
>Fritz Sonnichsen wrote:
>
>> I am working with an engineering department here, and we are trying to
>> develop, for the lab, a Marconi or spark sending unit for demonstration
>> purposes. We have sucessfully built a coherer and transmitted high voltage
>> sparks generated signals across a few feet. We would be interested in
>> hearing from anyone who has either theoretical information or practical
>> experience in building, early Marconi or spark sending units.
>>

>> Cheers
>> Fritz (AA2OP)
>

3489. Vente D&#65533;cam&#65533;trique

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: f5dvu <f5dvu@wanadoo.fr>
Message-ID: <8eed0c$m0f$1@wanadoo.fr>
Source record: 60997

De: f5dvu <f5dvu@wanadoo.fr>
Objet: Vente Mat&#65533;riel Radioamateur.
Date : jeudi 27 avril 2000 08:53

Bonjour &#65533; tous je revend du mat&#65533;riel radioamateur qui est le suivant
D&#65533;cam&#65533;trique TS870 HF Toutes bandes avec en cadeau le SP31 Haut parleur avec
filtrage + un micro MC60 ** PRIX pour le tout 12000f..
Merci d'avoir lu se message de vente

Cordialement Eddy.
--
Mr et Mme Lannoy Eddy
et leurs enfants
chez Marmiton
74570 Evires
France
Tel : 04.50.62.08.94
Portable : 06.88.40.64.01
E-MAIL . f5dvu@wanadoo.fr

3490. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: choronzon@gmx.de
Message-ID: <390ac7e8.6767850@schleupen.de>
Source record: 60998
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

On Fri, 28 Apr 2000 21:11:07 -0700, " H. Peter Friedrichs"
<NOSPAMpfriedr@azstarnet.com> wrote:

Try ebay! I've seen X-Y plotters there for moderate prices.
You'll need a pot and some wiring, but those are minor problems.

OH BTW, beautiful craftsmanship!!

>Hi to all:
>
>I have begun experimenting with some homemade (point contact)
>transistors. Transistor action, while perfectly evident through current
>measurements, has become troublesome and tedious to with multiple meters
>and power supplies.
>
>What I'm really looking for is a curve tracer, specifically the modular
>type that can be connected to a common o-scope to to display curve
>families.
>
>Anyone out there have one collecting dust in their ham shack or storage
>closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>my address to email.
>
>BTW, if you'd like to see a few pictures, check out these URLs:
>
>http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
>The last URL is a photomicrograph of the electrodes in the transistor
>shown in the first URL. If you are patient enough, look at 'em all.
>
>Thanks in advance.
>
>Pete
>

3491. WTB:Motor Generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Smith-Gaspard <w4ono@citrus.infi.net>
Message-ID: <390AD368.8A374D03@citrus.infi.net>
Source record: 60999

Greetings ...

I am interested in purchasing a 12 VDC to 120 VAC Motor
Generator with an Ampacity factor of 1000 VA or greater.

Please contact me at my eMail address with your cost including
shipping to Florida.

73 de Jim W4ONO .-.-.

3492. Connect Kantronics Interface][with IBM PC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: "See Fung, Lee" <seefung@pc.jaring.my>
Message-ID: <8eerqm$n36$1@news6.jaring.my>
Source record: 61000

Much appreciate if someone can tell me if it's possible to connect a TNC,
the Kantronics Interface][with an IBM PC.

Someone has given the local club one and it's lying around.

If there's any info please mailto:seefung@pc.jaring.my

Many thanks!

Best 73,
de 9M2SF
See Fung

3493. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Kenneth Casselman <ken.casselman@home.com>
Message-ID: <390B2887.2DDE@home.com>
Source record: 61001
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

H. Peter Friedrichs wrote:
>
> Hi to all:
>
> I have begun experimenting with some homemade (point contact)
> transistors. ...

...
> BTW, if you'd like to see a few pictures, check out these URLs:
>
> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
> The last URL is a photomicrograph of the electrodes in the transistor
> shown in the first URL. If you are patient enough, look at 'em all.
>
> Thanks in advance.
>
> Pete

Yes indeed. Take a look.
This stuff's amazing!

Ken

3494. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000429142356.22718.00001006@ng-cg1.aol.com>
Source record: 61002

>
>Try ebay! Ii¿½ve seen X-Y plotters there for moderate prices.
>Youï¿½ll need a pot and some wiring, but those are minor problems.
>
>OH BTW, beautiful craftsmanship!!
>
>>Hi to all:
>>
>>I have begun experimenting with some homemade (point contact)
>>transistors. Transistor action, while perfectly evident through current
>>measurements, has become troublesome and tedious to with multiple meters
>>and power supplies.
>>
>>What I'm really looking for is a curve tracer, specifically the modular
>>type that can be connected to a common o-scope to to display curve
>>families.
>>
>>Anyone out there have one collecting dust in their ham shack or storage
>>closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>>my address to email.
>>
>>BTW, if you'd like to see a few pictures, check out these URLs:

Talk about day late and a dollar short, The garbage truck got my old Heathkit tracer yesterday. Could have been had for the shipping.

3495. National NCL 2000 amp parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Beverly Kelly <blkelly@jps.net>
Message-ID: <390b33d2$1_1@news.greatbasin.net>
Source record: 61003
Cross-posted to: alt.ham-radio.hf,alt.ham-radio.marketplace,news.groups.radio.amateur.equipment,rec.ham-radio,rec.ham-radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am looking for dead NCL 2000 amps and parts, especially a cabinet, to finish my amp project.

KD6UW

Reply to hflores@zdnetonebox.com with description and price.

3496. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: adouglas@gis.net
Message-ID: <390b244f.6845632@news.newsguy.com>
Source record: 61004
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Hi,
The B&K 501A was relatively inexpensive and works well. There were
other brands also, made for radio-TV servicemen.

73, Alan

3497. FA: Heathkit HM-2140 wattmeter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efi3n0atl@enews1.newsguy.com>
Source record: 61005
Cross-posted to:
rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

FA a very clean Heathkit HM2140 wattmeter.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=317571535

73

Ozzie, w6icm

3498. FA: Collins trim ring

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efibd0b4v@enews1.newsguy.com>
Source record: 61006
Cross-posted to:
rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

FA Collins S Line Trim Ring (Metal).

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=317942158

73

Ozzie, w6icm

3499. FA; Jennings Vacuum variable UCS-300

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efijo0bcp@enews1.newsguy.com>
Source record: 61007
Cross-posted to:
rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors

FA Jennings Vacuum Variable UCS-300. Nice.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=317976043

73

Ozzie, w6icm

3500. FA: Collins 51J4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efiqj0bj1@enews1.newsguy.com>
Source record: 61008
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

FA Collins 51J4 nice receiver. It has very nice front panel. Looks great.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=318743532

73

Ozie, w6icm

3501. FA: tube tester, Triplett 1-177-B

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efjhk09fj@enews2.newsguy.com>
Source record: 61009
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.audio.tubes

FA Tube tester, military type Triplett 1-177-B. Nice shape.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316261473

73

Ozzie

3502. FA: MX-949 A/U tube socket adapter kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ozzie Diaz <w6icm@sisqtel.net>
Message-ID: <8efjog09k2@enews2.newsguy.com>
Source record: 61010
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.amateur.homebrew,rec.radio.amateur.equipment,rec.radio.amateur.boatanchors,rec.audio.tubes

FA Military MX-949 A/U tube socket adapter kit....this unit connects to tube tester.

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=316261473

73

Ozzie

3503. Re: Want to build signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <390B6B54.B59E5A16@sympatico.ca>
Source record: 61011

Maxim has a function generator IC that goes up to 20 Mhz.! VE2AUC

Rick Haub wrote:

> Subject pretty much says it all. I would like to build an signal
> generator that goes from about 30kHz to about 10MHz. Can anyone point me
> to a web site or mag article?
>
> Thanks,
>
> Rick KC0GIX

3504. Mobile Power Connection 96 Chev Blazer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Lottoman <lottoman@skypoint.com>
Message-ID: <8eftbi$3057$1@shadow.skypoint.net>
Source record: 61012
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Anyone have any ideas for running a power cable from the battery to inside the passenger compartment on a 96' Chevy Blazer?

Thanks in advance!!

3505. Re: 10 GHz question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <390B8060.60E2@pop.removethistomailme.net>
Source record: 61013

Brian Yee wrote:
>
> Brian,
>
> Yes, it is possible to do full duplex down the same coax.

That seems to be a common sentiment, but it really depends on what your definition of "full duplex" is. Physically you can pretend you have a full-duplex link, but logically you can't receive and transmit valid data at the same instant, without a complex system at the IF end to cancel out the FM modulation you're applying to the transmitter (which is also your receiver LO).

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3506. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <390B811F.67E7@pop.removethistomailme.net>
Source record: 61014
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

H. Peter Friedrichs wrote:
>
> Hi to all:
>
> I have begun experimenting with some homemade (point contact)
> transistors. Transistor action, while perfectly evident through current
> measurements, has become troublesome and tedious to with multiple meters
> and power supplies.
>
> What I'm really looking for is a curve tracer, specifically the modular
> type that can be connected to a common o-scope to to display curve
> families.
>
> Anyone out there have one collecting dust in their ham shack or storage
> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
> my address to email.
>
> BTW, if you'd like to see a few pictures, check out these URLs:
>
> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
> The last URL is a photomicrograph of the electrodes in the transistor
> shown in the first URL. If you are patient enough, look at 'em all.
>
> Thanks in advance.
>
> Pete

Hardcore stuff! Haven't seen anyone build their own transistors before.

The latest Tucker Electronics catalog shows an inexpensive and
nifty-looking curve tracer from one of the Asian manufacturers -- you
might have a look on their web site. eBay is certainly a good
suggestion as well for digging up one of the old Tektronix jobs.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3507. HF Amp using 4x150a Tubs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Chris Snyder <cesnyder@bigfoot.com>
Message-ID: <390B919A.EE4E1C38@bigfoot.com>
Source record: 61015

I'm trying to find a schematic for an 80-10m HF amplifier using a pair
of
4x150a (4cx150a) tubes. An amplifier using these tube should provide me

about 500 watts. Can anyone help.

Chris
NG3F
ng3f@bigfoot.com

3508. 6mtr Xvtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Chris NG3F <ng3f@bigfoot.com>
Message-ID: <390B9EDA.C26B197A@bigfoot.com>
Source record: 61016

looking for a 6meter transverter schematic for homebrewing.
using 10m in (have FM installed) to 6m out.

tnx and 73's

Chris NG3F

3509. Re: Mobile Power Connection 96 Chev Blazer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <390BA462.B8A9C3F8@oio.net>
Source record: 61017
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Lottoman,
Look around on the firewall, see if there is a plugged
access hole. If so, cut out the 'stopper' enough to feed
a power lead through it. If no access hole, drill one large
enough for the power lead AND a rubber grommet.
There are access holes 'all' over a vehicle, just gotta
find one....
'Doc

3510. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Ian Jackson <ianjackson@g3ohx.demon.co.uk>
Message-ID: <ziw8ICAq2hC5EwZa@g3ohx.demon.co.uk>
Source record: 61142

In article <3907662c.3462250@news.corecomm.net>, jyazel@core.com writes
>On Tue, 25 Apr 2000 14:12:49 -0400, Jeff VE3NVY <aj713@hwcn.org> wrote:
>
>>
>>remember th egoo dol ddays when every electronic stor ein the country had
>>a heathkit product on their shelf where every radio enthisiat had a
>>project half finishe dsitting on his desk and half the radios on th
>>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>>there is a new comapny starting up in hamilton ontario an dthey will ahve
>>kits for everything from kits gor you rkids (like a simple blinky flasher
>>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>>home an daccesorcies be it a dsp or even an antennae tuner it will be
>>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>>word aroun d finally the ol dwill b enew again wouldnt you all like a
>>kit to say i built it myself
>>
>>
>>jeff
>>aj713@hwcn.org -- or--
>>ve3nvy@rac.ca
>>
> --
>
> What language is this in?
>
>
>
It sure ain't English, but I like it! It's a pretty good way of 'coding'
a message. It's surprising what a 'space in the wrong place' will do.

Ian.
--
Ian Jackson

3511. High Voltage Rectifiers for auction

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <390A2777.63A91674@home.com>
Source record: 61143

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=320308289

3512. Re: Simple superhets (was Re: Voltage doubling, How high can I go?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-29 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-2904000049090001@usrh-5-9.hip.cam.org>
Source record: 61144

In article <hpeO4.1776$yg5.157549@nntp3.onemain.com>, "Mike Silva"
<mjsilva@jps.net> wrote:

> Steve Ratzlaff wrote in message <39079E1A.26A7E7DF@flash.net>...
>
> >I could also ask why you are contemplating building a tube superhet,
> >when an equivalent solidstate version would be easier. (See
> >aforementioned Solid State Design book for solidstate superhet
> >circuits.)
> >Steve AA7U
>
>
> Just as a general FYI on simple tube superhets, the simplest design (for HF)
> consists of a converter tube (6K8, 6SA7, 6BE6) driving a regenerative
> detector and audio amplifier. These latter two stages were usually combined
> as a single dual-triode (6C8G, 6SN7, 12AU7) so the whole rig used two tubes.
> This format was in radio handbooks from the mid '30s to the end of the '40s
> or beyond. One of the members of the glowbugs list, Baz ZL1DD, says they
> were an excellent and popular improvement to the classic regen, since they
> avoided all the problems of connecting the detector directly to the antenna.
> Frank Jones W6AJF called these "super gainers," an extension of his term
> "gainers" for regens (in particular, a detector and one stage of audio).
>
> For cheap BC reception manufacturers would sometimes produce a stripped-down
> All American 5 radio without an IF stage -- just a converter going through
> an IF transformer to the (envelope) detector. Don't know how popular those
> were, given how much gain and selectivity were lost in leaving out the IF
> tube and second transformer.
>
> OTs and others, feel free to correct any of the above...
>
> 73,
> Mike, KK6GM

I won't go into the debate of performance, since how well something
works realy depends on the design.

But the most immediate reason that comes to mind against using tubes
is that there is more formality to building with tubes.

But then on second thought I realize that's not true, and I figure it's
worth adding some comments.

When I picture tube equipment, I picture an aluminum or steel chassis,
and the need for heavy metalwork, and something that really isn't open
to changes.

So let's change the situation. Someone mentioned making the power supply external, so it can serve multiple purposes. A further advantage is that a power supply stays constant, whereas the RF design may be something someone wants to change. And once you've moved the heavy transformer elsewhere, tube components tend to be as light as solid state components.

Then you get rid of the chassis with the holes for the sockets punched out. Build on circuit board, with the chassis inverted and used only as a cover. Just as with solid-state equipment, the copper on the circuit board supplies a good ground surface, one that can easily be soldered to. And if something is changed, it's a simple matter of soldering a lead to some other point on the circuit board. It is a lot easier to work circuit board than to put tube socket holes in an aluminum (or steel) chassis. If you scrap the whole thing, the circuit board is cheaper than a new aluminum plate or chassis.

Once you have the good solderable ground surface, one can actually be more creative. Do the IF transformers have to be mounted on the top of the chassis, with associated metal work, or can they be mounted on the underside of the circuit board where it might be easier to mount them?

You also gain the ability to put in a lot of shielding, by soldering pieces of circuit board in the appropriate places.

None of this is new, it's common for solid state work, but it never really caught on during the days of tubes, and I sure haven't seen anything along these lines in recent years.

This scheme also allows for modularization. Instead of one large piece of circuit board, use a number of pieces that straddle the chassis. Then if you need to do major reworking of a section, you only scrap a bit of the work.

Or you can build up different modules, and try them in turn until you get the results you want. Or make the unit multi-purpose by switching in different modules.

This sort of construction makes for starting simple, and then working up. Build an audio amplifier. Then build a regen detector. Once you've played with that, then add a converter ahead of it. If you find you need IF gain or filtering, then you can add that later. If the regen detector doesn't work out, then replace it with a selective IF strip and product detector.

It seems to me that one inhibition to building is that whole concept of having to make it all nice and neat, and start with the finished product (or start simple, throw it away, and build something better). Once you accept that it doesn't have to look commercially built, you will probably get further. And once you get over the idea of putting it all in one box, you make it far easier to perfect. Or cheat for that matter; people will buy expensive external VFOs, or did back when they had to be external, but you don't often hear about someone buying an external VFO for an old rig, and using it with

a piece of homebrew equipment.

Michael VE2BVW

3513. Slide-back circuit (detector) for Hellschreib?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <390cbc3a.7528208@news.online.no>
Source record: 60945

Slide back detector has better zero reference for two-tone RTTY, but not for FSK according to some IARU paper for for 1975 conference, RSGB wrote in length about using 850Hz shift with two tones instead of FSK

Have seen some notes about the slide back detector for RTTY, but it is almost 30 years ago, but time constants may not be optimum for single frequency CW receiption

I use MC1496 quadrature detector and need a circuit to add the slide-back as a post detector facility, is any circuit diagram available for this?

73
jan-martin
LA8AK

3514. Re: Audio (modulation) transformer question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Og8P4.37917$VR.803565@news5.giganews.com>
Source record: 60946
Cross-posted to: sci.electronics.basics,rec.radio.amateur.homebrew

Well before this gets out of hand I'd like to add my ideas.

The two windings are the same impedance so it makes no difference which is used for which. In many cases the audio side impedance is higher but not here.

The direct current in the two windings will tend to cancel so I wouldn't worry about it.

The difference between a 10k and a 5k winding has to do with the frequency respoinse. In other words, if you use a winding at an impedance far from its design center, you will find the low or high frequencies of the audio will be lost, depending on which way you go. Further, the excitation current of a 10k winding will be less than of a 5k winding on the same core. The bottom line here is don't worry about it as long as you are in the general ball park. A 'mismatch' of 2 to 1 isn't enough for concern. In transformers, bigger is usually better.

73, Bob K6DDX

3515. 2 meter halo

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: bujiaj8@aol.com
Message-ID: <20000429205201.09509.00000376@ng-cn1.aol.com>
Source record: 61018

I am interested in building a 2 meter halo for mobile use. Does anybody have any plans or info on this homebrew project? Pls email with info.
Bill

3516. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: merryprankster <merryprankster@cwcom.net>
Message-ID: <t2MO4.3245$rv6.140782@news1-hme0>
Source record: 61019

Remember the good old days ?
When every electronic store in the country.
Had a Heathkit product on their shelf.
Where every radio enthusiast. Had a project half finished, sitting on his desk
Not forgetting that two thirds of the radios, on the market.
Were homebrewed, and not those fancy new electronic gizmos.
Well there is a new company starting up in Hamilton Ontario,
In addition, they will have kits for everything, from kits for your kids.
(Like a simple blink flasher) Including a kit even for, Grand dad's strange hobby.
For dad. A QRP transmitter to use in his station at home.
For Mom, a home brew Big boy vibrator kit,
For sister, the Intro wobble kit
Moreover, accessories too. Be it a DSP or even an antennae tuner.
It will be coming soon! Watch this newsgroup, for more info.
When it starts pass, the word around, finally the old will be new again.
Would not you all like a kit to say. I built it myself.
Well if you do buy a digital, tape recorder kit. When you have assembled your kit.
You can record this message into the microphone
I BUILT YOU ALL BY MYSELF. It will say back to you.
Yes and that's why you live alone

jeff
aj713@hwcn.org -- or--
ve3nvy@rac.ca

3517. Re: Wanted: "QRP Power"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: merryprankster <merryprankster@cwcom.net>
Message-ID: <l4MO4.3247$rv6.140867@news1-hme0>
Source record: 61020

Well Love , you might find it on the QRP site.

3518. Re: (no subject)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Dwight Stewart <stewartx@sccoast.net>
Message-ID: <390BBE15.CD1FD66@sccoast.net>
Source record: 61021

maggie verry wrote:
>
> unsubscribe

You forget to put "unsubscribe" in the subject header. Not that it
would make any difference, mind you. This is not how you "unsubscribe"
to a newsgroup. You have to use the "unsubscribe" menu item in your
news program (after selecting the newsgroup you want to "unsubscribe" from).

Dwight Stewart (W5NET)

3519. Re: HF Amp using 4x150a Tubs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sgngcttci50133@corp.supernews.com>
Source record: 61022

In article <390B919A.EE4E1C38@bigfoot.com>, cesnyder@bigfoot.com says...
>
>I'm trying to find a schematic for an 80-10m HF amplifier using a pair
>of
>4x150a (4cx150a) tubes. An amplifier using these tube should provide
me
>
>about 500 watts. Can anyone help.
>
>Chris
>NG3F
>ng3f@bigfoot.com
>
This is not exactly help, however, look for 'all' the articles for
4CX250 amps. There are hundreds of articles. The 150 is the little
brother of the 250. It is 'plug and play' except that you must run
lower plate and screen voltage.

3520. Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390BC27F.EEE83B73@webaxs.net>
Source record: 61023
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Hi all,

I'll make an 80m SSB transceiver, and possibly make it a kit,
after i get a source of parts that don't cost too much.

Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
cost a lot?

Apart from Amidon, are there any other sources of readily
available toroids/IF-transformers?

I'm aiming for 1-10W output, 455kHz single conversion, and
battery-portable.

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3521. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sgnguab0i5099@corp.supernews.com>
Source record: 61024

In article <8e7bu5$r90$2@campus3.mtu.edu>, dmbrodbe@mtu.edu says...
>
>Hamm4fun <hamm4fun@aol.com> wrote:
>> >I found that rewinding the alternator with more
>> >turns of smaller wire, and making it a 6 pole single phase worked
>> >extremely well. 600 shaft rpm "gave more out than in."
>> >
>> >
>> That should be a neat trick.
>> Now if you can get a motor with this same efficencey you could hook
it all
>> together, give it a spin and it would run forever.
>
>--> Perhaps he meant that the power generated by the windmill exceeded
that
>lost in the alternator's field windings.
>
>---

> David Brodbeck, N8SRE
dmbrodbe@mtu.edu
> finger gull@cyberspace.org for my public key block.
>
> "Jazz musicians say only the most adoring things about one another;
> actors, generally the same. Only writers claw and spit, even though
> nobody cares but other writers, and public opinion of the attackee
is
> affected not at all." -- Roger Rosenblatt
Yes Dave, you were exactly on track. The feild was wanting about
2 amps at 12vdc to get the ball rolling. After my rewind to single
phase, and using 4 diodes instead of 6, i got breakeven at 600 rpm.
Also, you can do many good things with the single phase winding and
a few transformers. Like step up the voltage to send to your home
which is normally a hundred feet or more away.

3522. QRP RIG COMPARISON

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Jay Moyer <jmoyer43@earthlink.net>
Message-ID: <390BAA82.1DC2D825@earthlink.net>
Source record: 61025

I have decided to build my first rig and have found plenty of rigs to chose from. I want a 20m rig but the choices are overwhelming. I have found the DSW20, SW20, OHR 100, GB20, NorCal20, Wilderness Radio SST and Sierra, RedHot20, and TenTec. Is there any articles available on the web or persons with personal experience that can help narrow down the choices as my knowledge in the subject is limited. Thank you

Jay Moyer
jsmoyer

3523. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-3004000226250001@usrh-5-119.hip.cam.org>
Source record: 61026
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

In article <390BC27F.EEE83B73@webaxs.net>, "Russ.Shaw"
<russell@webaxs.net> wrote:

> Hi all,
>
> I'll make an 80m SSB transceiver, and possibly make it a kit,
> after i get a source of parts that don't cost too much.
>
> Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
> cost a lot?
>
> Apart from Amidon, are there any other sources of readily
> available toroids/IF-transformers?
>
> I'm aiming for 1-10W output, 455kHz single conversion, and
> battery-portable.
>

It strikes me that if there were suitable inexpensive 455KHz filters, we would have heard about them long ago.

At 455KHz, most construction articles used either Collins mechanical filters, which of course tend to be expensive, or home made crystal lattice filters made with surplus crystals, preferably in FT-243 cases so they could be ground to the needed frequency.

The obvious "cheap" filter would be a ceramic filter. But in reading ham magazines from the past forty years, I've only seen very vague references about using them for transmitting purposes. The articles that come to mind were more idea articles, to hint at something or to point to such a filter and suggest some uses for them. But hard information wasn't included so it's hard to tell whether there was merit behind the suggestion, and nobody went and took the idea further into a construction article. The filters discussed may not have been really great for transmitting purposes, or perhaps the only reason they were considered "inexpensive" was in comparison with Collins mechanical filters.

Of course, some of the Japanese rigs seem to use ceramic filters at 455KHz for transmitting, but I've never seen prices for the filters alone, so they may not be inexpensive.

Even commonly available ceramic filters, such as the type you find in a lot of AM broadcast radios, don't seem to have been given much experimental treatment. Those would probably be too wide, but I wonder if you could get a sharp enough skirt for SSB if you cascaded some

filters. You can get narrower ceramic filters, I've seen them in CB sets and maybe http://www.digikey.com carries them along with wider ceramic filters. Again, the question is whether cascading will give you a decent filter overall.

I've not seen the actual article, but I have seen mention of an piece about cascading ceramic filters. From a previous post of mine:

"In an old article in 73 (December 1977) about the Yaesu FRG-7, reference is made to an "by Ron Risher VK3OM in the March 1977 issue of "Amateur Radio". He describes... an alternate filter, consisting of four cascaded SFD-455-B solid state filters linked by small coupling capacitors". It might be interesting to someone who can get ahold of the magazine, which I assume is Australian."

It sounds like an idea to look into, though I have no idea of the specs of that filter.

Some people have speculated, and done some testing, in rec.radio.amateur.homebrew about using 455KHz ceramic resonators, which are cheap and fairly readily available, in ladder filters. Doing a search at http://www.dejanews.com will turn up some old posts about the idea.

Of course, once we are talking about ladder filters, one could abondon the 455KHz IF. A lot of work has been done on ladder filters in homebrew equipment, and the interest has arisen because the crystals are cheap, and you only need them on one frequency (unlike lattice filters), and surely because inexpensive commerically made filters are non-existent. A lot can be said for putting the IF somewhere in the HF range. The crystals may be even easier fo find than a ceramic resonator at 455KHz, and you won't have to worry about image rejection.

QST has published a number of articles about ladder filter design, and they've been reprinted in various ARRL books. And I've seen some information about them in RSGB publications.

Michael VE2BVW

3524. Re: HF Amp using 4x150a Tubs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: awn <samuel.morse@nomail.cpod.fr>
Message-ID: <01bfb275$543f1000$398127d4@f6awn.cpod.fr>
Source record: 61027

Chris Snyder <cesnyder@bigfoot.com> a �crit dans l'article
<390B919A.EE4E1C38@bigfoot.com>...
> I'm trying to find a schematic for an 80-10m HF amplifier using a
pair
> of
> 4x150a (4cx150a) tubes. An amplifier using these tube should provide
me
>
> about 500 watts. Can anyone help.
>
> Chris
> NG3F
> ng3f@bigfoot.com

Good morning,

You can try to get the TOKYO HI-POWER HL-1K schematic.
It's exactly what you want and with good ideas.

73,
Francis
F6AWN

3525. Re: 6mtr Xvtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: kg4fet@aol.com
Message-ID: <20000430064249.19183.00000481@ng-ci1.aol.com>
Source record: 61028

Try out www.6mt.com. Look at the 6mt tech list. Toward the bottom of the tech list is 3 zip files for transverter. Also some other great 6 meter stuff as well.
Good Luck
Sandor KG4FET

3526. Re: 2 meter halo

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: kg4fet@aol.com
Message-ID: <20000430064458.19183.00000482@ng-ci1.aol.com>
Source record: 61029

http://members.aol.com/n2kbk/2mhalo.html..... This site has an easy cheap to build Halo on it for mobile use.
Sandor KG4FET

3527. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <390C156A.5AD7EE64@bellsouth.net>
Source record: 61030
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Russ.Shaw wrote:

> Hi all,
>
> I'll make an 80m SSB transceiver, and possibly make it a kit,
> after i get a source of parts that don't cost too much.
>
> Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
> cost a lot?
>
> Apart from Amidon, are there any other sources of readily
> available toroids/IF-transformers?
>
> I'm aiming for 1-10W output, 455kHz single conversion, and
> battery-portable.
>

Why not pick a higher IF frequency? This would allow for a lower freq VFO, and better image rejection. Then you could use inexpensive color burst or computer xtals for the filter.

Dale W4OP

3528. Re: HF Amp using 4x150a Tubs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Smith-Gaspard <w4ono@citrus.infi.net>
Message-ID: <390C2251.54D5011@citrus.infi.net>
Source record: 61031

Greetings Chris ...

What plate load Z would you be running? What class do you want to
design the Amp for? I'll check my references for some ideas and send
them to you.
73 de Jim W4ONO .-.-.
======================

Chris Snyder wrote:

> I'm trying to find a schematic for an 80-10m HF amplifier using a pair
> of
> 4x150a (4cx150a) tubes. An amplifier using these tube should provide me
>
> about 500 watts. Can anyone help.
>
> Chris
> NG3F
> ng3f@bigfoot.com

3529. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <mRVO4.40623$fV.2532339@bgtnsc05-news.ops.worldnet.att.net>
Source record: 61032
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

There are some options for the filters you need; these filters are made by Murata. The cheapest filter is the CFWS-455K, a 6 element ladder filter for about 4 dollars. A better choice would be the CFS-455K, an 11 element ladder filter for about 22 dollars. The problem I have had over the years is buying them in small quantities. The only way I was able to procure them was by ordering samples from Stan Clothier Associates, one of Murata's reps. Murata didn't even want to consider small orders; I know we used to use quite a few of them when I worked at Rockwell, but for critical applications, we used the Rockwell-Collins torsional mode mechanical filters, at about 90 dollars apiece in small quantities.
One final note; Murata assigns a letter code, denoting the bandwidth of their filters. Example:
a CFWS-455E would be an NBFM bandwidth, while a CFWS-455H would be a 6KHz bandwidth for AM, a CFWS-455I would be a 4KHz bandwidth, and a CFWS-455K would be a 2.4KHz bandwidth for SSB. The CFWS series of filters are typically the ones that you see used in the 455KHz IF strip in most of your commercially available radios. The SSB filter in many radios such as the FRG-100, the AOR-7030, and others use something similar to the CFS series.
Normally, I don't usually make a whole group posting, but I have seen this question about filters come up several times on the newsgroups.
One more request I have seen is about product detectors for some of the boatanchors; if anybody is interested, I would more than happy to send a schematic of the circuit I have been using in my homebrew designs. Also, if anybody needs schematics of front-end filters for the 0 to 30MHz range, I can supply schematics for filters that will break this range up into 7 segments. I also have a PIN diode switching configuration that does not require a -V supply to reverse bias the diodes. Too bad I didn't think of this one!
If anybody would like a copy of my latest 0-30MHz receiver design, which uses a DDS for the LO, feel free to give me a shout, and I will be glad to send you the schematics, free of charge.

Pete Gianakopoulos
Chicago, Il.

Michael Black <blackm00@cam.org> wrote in message
news:blackm00-3004000226250001@usrh-5-119.hip.cam.org...
> In article <390BC27F.EEE83B73@webaxs.net>, "Russ.Shaw"
> <russell@webaxs.net> wrote:
>
> > Hi all,
> >
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> was merit behind the suggestion, and nobody went and took the idea
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> not have been really great for transmitting purposes, or perhaps
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> Even commonly available ceramic filters, such as the type you find
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> piece about cascading ceramic filters. From a previous post of
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>
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> FRG-7, reference is made to an "by Ron Risher VK3OM in the March 1977
> issue of "Amateur Radio". He describes... an alternate filter, consisting

> of four cascaded SFD-455-B solid state filters linked by small coupling
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> It sounds like an idea to look into, though I have no idea of the
> specs of that filter.
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> which are cheap and fairly readily available, in ladder filters.
> Doing a search at http://www.dejanews.com will turn up some old
> posts about the idea.
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> Of course, once we are talking about ladder filters, one could
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> are cheap, and you only need them on one frequency (unlike lattice
> filters), and surely because inexpensive commerically made filters
> are non-existent. A lot can be said for putting the IF somewhere
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> a ceramic resonator at 455KHz, and you won't have to worry about
> image rejection.
>
> QST has published a number of articles about ladder filter design,
> and they've been reprinted in various ARRL books. And I've seen
> some information about them in RSGB publications.
>
> Michael VE2BVW

3530. Re: Want to build signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <0UVO4.40628$fV.2532462@bgtnsc05-news.ops.worldnet.att.net>
Source record: 61033

Analog Devices has a DDS chip that is good up to about 50MHz, this chip is
the AD9851. Their newest on is the AD9852, but this device draws 1 amp at
3.3 volts, while the 9851 only draws about 140mA.
jos <soj@sympatico.ca> wrote in message
news:390B6B54.B59E5A16@sympatico.ca...
> Maxim has a function generator IC that goes up to 20 Mhz.! VE2AUC
>
> Rick Haub wrote:
>
> > Subject pretty much says it all. I would like to build an signal
> > generator that goes from about 30kHz to about 10MHz. Can anyone point me
> > to a web site or mag article?
> >
> > Thanks,
> >
> > Rick KC0GIX
>

3531. kind invitation: NL0FS-RadioPages

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Franz <fschmidt@casema.net>
Message-ID: <390b7aa6$0$10028@reader2>
Source record: 61034

Regards

--
Frans Schmidt

The -=NL0FS=-RadioPages:
REFERENCES FOR THE RADIOHOBBYIST:
included:
* best digital multimode stations webring
* radio chatroom
* live talking chatroom
* icq cb/shortwave/scanner people ring
* radio-modes poll
* radio message board
* askme.com : about radio
ETC.

WELCOME AT:

http://go.to/nl0fs

3532. unsubscribe

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: kc7kkw@juno.COM
Message-ID: <20000529.062546.5215.1.kc7kkw@juno.com>
Source record: 61035

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http://dl.www.juno.com/get/tagj.

3533. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: John <hydro@fx2.com>
Message-ID: <qeXO4.2118$cO.12642@newsfeed.slurp.net>
Source record: 61036
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Hi Russ
A easy to get source for 455 filters would be from Yaesu , Kenwood or Icom. They all use murata filters in there 455 IF . Good radios to look at would be , Kenwood 930 & 940. Yaesu Ft -102 , 757 (1000MP has a 2.7K wide murata filter in it's sub receiver) and many Icom's. You could buy them from the companies as parts for those radio's.

73's John

3534. Re: HF Amp using 4x150a Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: wlfuqu00@pop.UKy.EDU
Message-ID: <4.2.0.58.20000430112107.009fe180@pop.uky.edu>
Source record: 61037

At 04:30 AM 4/30/00 -0700, you wrote:

>In article <390B919A.EE4E1C38@bigfoot.com>, cesnyder@bigfoot.com says...
> >
> >I'm trying to find a schematic for an 80-10m HF amplifier using a pair
> >of 4x150a (4cx150a) tubes. An amplifier using these tube should provide me
> >about 500 watts. Can anyone help.
> >
> >Chris
> >NG3F
> >ng3f@bigfoot.com
> >
> This is not exactly help, however, look for 'all' the articles for
>4CX250 amps. There are hundreds of articles. The 150 is the little
>brother of the 250. It is 'plug and play' except that you must run
>lower plate and screen voltage.

The 4X150A/7034 tubes are electrically identical to 4CX250B's. They are
even rated for 250 Watts plate dissipation. The plain 4X150A may not be.
Look for the /7034 versions. Also, I have found that only about half of my
hamfest purchases of these tubes are good. So, make sure you have
plenty on hand when you are ready to fire up the amp. I am taking a
homebrew tester for these tubes to the Dayton Hamvention sense
I will be looking for some more there. Often you can get them for $5 each
if their condition
is unknown to the seller which works out to usually to $10 to $15 each for
good tubes. If they have any dents in the radiator at all, no matter how small,
don't buy them. Most likely they will have internal shorts. Also, check for the
obvious, cloudy glass around the seal, rattles and discolored radiators. Also,
an ohm meter to check filaments and for shorts is handy.
These tubes life time is very sensitive to filament voltage. DO NOT RUN
6.3 volts on the filament. Keep as close to 6.0 as possible. Or, maybe put in
a relay to drop the filament voltage a bit while in standby. Just a half a
volt will make quite a difference in life time. But, on the other hand they
are still
quite cheap.
One more comment, don't consider grounded grid, zero bias operation.
Their grids
will not take it.
good luck
es 73
Bill wa4lav

3535. Re: HF Amp using 4x150a Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: John Siegel <JohnASiegel@worldnet.att.net>
Message-ID: <390C5B1F.876AE436@worldnet.att.net>
Source record: 61038

One more suggestion in case you do not already have the tubes. There
are some other versions out there with unusual filament voltages that
may be available cheaper. Some years ago I bought 4 4X150Ds at a
hamfest at an amazingly low price. Most buyers were passing them up
because they have 25.2V filaments instead of 6.3 Since I was building
the amp I saw no problem in choosing the filament transformer to match
the tubes instead of vice-versa. However my amp was for 2 meters so I
can't help with HF amp ideas for these tubes.
John

Bill Fuqua wrote:
>
> At 04:30 AM 4/30/00 -0700, you wrote:
>
> >In article <390B919A.EE4E1C38@bigfoot.com>, cesnyder@bigfoot.com says...
> > >
> > >I'm trying to find a schematic for an 80-10m HF amplifier using a pair
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> volt will make quite a difference in life time. But, on the other hand they
> are still
> quite cheap.
> One more comment, don't consider grounded grid, zero bias operation.
> Their grids
> will not take it.
> good luck
> es 73
> Bill wa4lav

3536. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <anZO4.9135$sB3.6280@news.indigo.ie>
Source record: 61039
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

>Hi all,
>
>I'll make an 80m SSB transceiver, and possibly make it a kit,
>after i get a source of parts that don't cost too much.

CFJ455K5 2.4KHz at -6dB, 4.5KHz at -80dB.

Details from the Cirkit catalogue for 1997.

73, Ed. EI9GQ.

3537. FS: Transformer Winder

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <8ehktd$i37$1@ns2.foothill.net>
Source record: 61040

LARGE HEAVY TRANSFORMER WINDER. with Box of Bobbins and other transformer parts.. Has 3/16 H.P. motor. Variable speed, and reversible. Counter and transmission. Heavy steel platform. PICK UP ONLY!!!!
in Auburn California, 30 miles NE of Sacramento.
$`100.00

See Pics.

http://www.foothill.net/~soundval/TWIND-1.JPG
http://www.foothill.net/~soundval/TWIND-2.JPG
http://www.foothill.net/~soundval/TWIND-3.JPG
http://www.foothill.net/~soundval/TWIND-4.JPG

Eugene Rippen, 105 Donnington, Auburn, CA 95603

3538. Tone board help, please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: Brian Reay <brian.reay@bigfoot.com>
Message-ID: <9H0P4.12275$UC.146996@news2-hme0>
Source record: 61041
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Hi,

I aquired a couple of tone boards at a local rally- thought to to be CTCSS, but the came without info.

The PCB is around 1" by 1.5" and seems to mount by plugging onto 2 sets of 4 pins- all of which are grounded.

There is no makers name- just a part number B3024B.

There is a single IC S 7116A and one transistor.

There are 7 wires. 2 look like power, one is straight through and I think I can identify the I/O.

BUT I can't see a way to program the tones.

Any ideas anyone?

73

Brian
G8OSN

3539. Audio (modulation) transformer question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: JGinNY <jwg6@cornell.edu>
Message-ID: <390C9F56.E883C393@cornell.edu>
Source record: 61042
Cross-posted to: sci.electronics.basics,rec.radio.amateur.homebrew

This question deals with audio or modulation transformers, and their impedance ratings:

I am looking at a low-power radio transmitter circuit, which calls for a center-tapped AF transfomer to couple a single-ended, Class A modulator to the plate of a Class C RF amp tube. The circuit requires a 1:1 impedance ratio for this coupling.

The parts list indicates a 10,000 ohm AF output transformer. Only the primary winding is used, in autotransformer fashion. (That is, B+ goes to the center tap of the winding, one end of the winding goes the plate of the Class A modulator, and the opposite end goes to the plate of the Class C RF amp.)

Question is -- if the goal is a 1:1 impedance "transformation" between the two stages, then what difference would it make if the tfmr impedance rating were something other than 10 Kohm? Wouldn't the stated impedance rating be inconsequential, as long as the windings were symmetrical about the center-tap, giving the desired 1:1 ratio?

...or does the 10 K-ohm value refer to the _resistance_ across the winding itself?

In another circuit I saw, following the exact same scheme, the text mentions that the "higher load resistance" side of the transformer should go to the AF amp, and the other side should go to the RF amp. BUT if the winding is center-tapped, then wouldn't the load resistance be the same on both sides of the center-tap?

What gives? -- I don't quite follow this.
could anyone out there clarify...?

thanks!
J.

3540. NEW WORLD WIDE VOICE TEXT CHAT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: MITBR <mitbr@earthlink.net>
Message-ID: <%L1P4.11111$g4.321955@newsread2.prod.itd.earthlink.net>
Source record: 61043
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

Hello!!
I have a web page dedicated to the radio hobby here in Tampa Bay Florida. I am in the process of launching a new audio chat network on a channel for amateur radio enthusiasts. The idea is for webmasters to put the small html code somwhere on their amateur radio web page which would be linked all together worldwide. The system utilizes the new HearMe plugin which is a small 80k or so program new visitors of the amateur radio audio chat would download upon landing on the page which has the html code for the plugin. Please let me know if you decide to use the system so I can add your site to my links page to let others know your site is connected to the network. For a demonstration of the system you may email me for a time and date so you can see it in action. To get the html code please visit my web site below. To get further info on the HearMe requirments to have it work click on the help are for Hear Me on my web site. I am in no way affiliated with HearMe and my web site is a noncomercial page.You may also visit my radio page at the url below from 7pm to 8pm eastern time every day I try to be in my scanner audio chat at that time. I look forward to hearing from.
Thankyou
Best Regards
Tim Breckon--
Please visit my web site url below
Tampa Bay Radio Page
http://home.earthlink.net/~mitbr/Mi01000.htm

3541. Re: Audio (modulation) transformer question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-04-30 00:00:00 UTC
From: John Popelish <jpopelish@rica.net>
Message-ID: <390CB1EF.BB627EB8@rica.net>
Source record: 61044
Cross-posted to: sci.electronics.basics,rec.radio.amateur.homebrew

JGinNY wrote:
>
> This question deals with audio or modulation transformers, and their
> impedance ratings:
>
> I am looking at a low-power radio transmitter circuit, which calls for a
> center-tapped AF transfomer to couple a single-ended, Class A modulator
> to the plate of a Class C RF amp tube. The circuit requires a 1:1
> impedance ratio for this coupling.
>
> The parts list indicates a 10,000 ohm AF output transformer. Only the
> primary winding is used, in autotransformer fashion. (That is, B+ goes
> to the center tap of the winding, one end of the winding goes the plate
> of the Class A modulator, and the opposite end goes to the plate of the
> Class C RF amp.)
>
> Question is -- if the goal is a 1:1 impedance "transformation" between
> the two stages, then what difference would it make if the tfmr impedance
> rating were something other than 10 Kohm? Wouldn't the stated
> impedance rating be inconsequential, as long as the windings were
> symmetrical about the center-tap, giving the desired 1:1 ratio?
>
> ...or does the 10 K-ohm value refer to the _resistance_ across the
> winding itself?
>
> In another circuit I saw, following the exact same scheme, the text
> mentions that the "higher load resistance" side of the transformer
> should go to the AF amp, and the other side should go to the RF amp.
> BUT if the winding is center-tapped, then wouldn't the load resistance
> be the same on both sides of the center-tap?

I think this description is about using both windings, not an auto
transformer connection, and not necessarily a 1 to 1 ratio. However,
a 10k to 10k transformer normally has one winding with a lower DC
resistance, because one winding is put on the form first, and so has
shorter turns than the second winding. Both windings have to have the
same number of turns to have the same impedance, though. Maybe they
are talking about this effect.
>
> What gives? -- I don't quite follow this.
> could anyone out there clarify...?
>
> thanks!

> J.

First of all, if the transformer has only a single winding connected, the ratio with the unused winding is pretty unimportant. It might have just as well been a 10kct to 8 ohm transformer. Though, if I was doing what you describe, I would be tempted to parallel the primary and secondary to lower the copper losses. As to what impedance the transformer should have, this is related to the frequency response of the transformer. At the minimum frequency end of the range, the inductance of the winding starts to show up in parallel with the impedance coming through the mutual inductance from the other winding, so the transformer total impedance drops as the frequency goes down further. At the high end of the operating frequency range, the leakage inductance shows up in series with transformed impedance from the other winding, so the winding impedance rises at higher frequencies. The 10k load impedance rating is the one that allows the transformer to be fairly ideal over the specified frequency range. If you don't need the low frequency end, you could use it with somewhat higher impedance signals, and if the high frequency end is not important, you could use it at somewhat lower impedance levels. The impedance rating is just an engineering judgment that takes a whole lot of compromises into account.

I big concern for me with this type of application is the allowable DC bias current the transformer can stand before the core saturates. Does the circuit you are building have some way to balance the current in both halves of the winding so that no net DC flows around the core?
--
John Popelish

3542. Re: OT:CAD-low cost

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: quatsein@island.net
Message-ID: <390cd774.123664417@news.cr.island.net>
Source record: 60947

What did you not like about Intellicad 2000?

Steve

On 8 Feb 00 05:38:11 GMT, af389@lafn.ORG (David Shalita) wrote:

>Hi,
>
>Can you folks identify a low cost CAD software I can
>use to make general mechanical drawings, QRP cabinet layouts,
>ALTOID Tin layouts, lawn layouts, etc?
>
>Shareware would be the best but do not limit recommendations.
>
>Thanks and 73, W6MIK
>--
>David Shalita (Dave)
>af389@lafn.org
>Van Nuys, CA

3543. Transverters (144MHz-28MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: therelic@dingoblue.net.au
Message-ID: <390d6216.32000797@news.dingoblue.net.au>
Source record: 60948

Hello,

I am wondering if anybody would have schematics for a relatively
'easy-to-build.' 144MHz to 28MHz transverter.

Coverage isnt that important. At least 3MHz would be great.

3544. #BGY36 18 Watt VHF RF Amp Module.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: artky1k@ctel.net
Message-ID: <390d7d22.1722625@news.northlandlink.com>
Source record: 60949

Does anyone have specs and/or ap notes for a #BGY36 18 Watt 12 Volt
VHF RF Power Linear Amp Module? It's not listed on the Phillips page,
probably because it's not a current product.

Write me direct please, and many thanks.

Art

3545. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: ignacy@num.ads.uga.edu
Message-ID: <390d97c5$1$vtanpl$mr2ice@news.uga.edu>
Source record: 60950
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

>CFJ455K5 2.4KHz at -6dB, 4.5KHz at -80dB.

>Details from the Cirkit catalogue for 1997.

The filter has good specs but I saw a big difference after replacing it
with a crystal filter. I got my Kenwood crystal filter (new) for $60.

Ignacy, NO9E

3546. FS: MFJ-9020 20 Meter QRP CW Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: Pete Buehner <kc8er@harborcom.net>
Message-ID: <XLgP4.8138$ZE4.145664@ord-read.news.verio.net>
Source record: 60951

For Sale:

MFJ-9020 20 Meter QRP CW Transceiver. Includes the MFJ-412 Iambic Keyer Module (installed) and the MFJ-726 Narrow Audio CW Filter (installed). Rig less than 2 years old. Non-smoker. Appearance (on a scale of 10): 9.5! Everything in excellent working condition. With all documentation and in original box. Selling because I just purchased the MFJ-9420 with CW board.

Original Prices:

MFJ-9020 Transceiver 169.95
MFJ-726 Narrow Audio Filter 29.95
MFJ-412 Curtis Iambic Keyer 39.95

$239.85 Original Cost!

Asking: $180.00 Like New!
You pay for shipping.

...Pete

Email address: kc8er@oh.verio.com
Phone: (440)-354-4538

3547. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: nikosdad@my-deja.com
Message-ID: <8ek6vi$8l0$1@nnrp1.deja.com>
Source record: 60952
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

A while ago there was a guy selling a kit, looked good to me for basic
testing. I checked and the web site is still up at;

http://www.fullnet.com/u/tomg/gooteect.htm

Stephen

In article <390A60DA.8AF23F0C@azstarnet.com>,
" H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com> wrote:
> Hi to all:
>
> I have begun experimenting with some homemade (point contact)
> transistors. Transistor action, while perfectly evident through
current
> measurements, has become troublesome and tedious to with multiple
meters
> and power supplies.
>
> What I'm really looking for is a curve tracer, specifically the
modular
> type that can be connected to a common o-scope to to display curve
> families.
>
> Anyone out there have one collecting dust in their ham shack or
storage
> closet? Willing to part with it for a reasonable sum? Remove NOSPAM
from
> my address to email.
>
> BTW, if you'd like to see a few pictures, check out these URLs:
>
> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
> The last URL is a photomicrograph of the electrodes in the transistor
> shown in the first URL. If you are patient enough, look at 'em all.
>
> Thanks in advance.
>
> Pete
>

>

Sent via Deja.com http://www.deja.com/
Before you buy.

3548. Re: 10 GHz question?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <ps6rgssskk3cuqr5r7i8t8r8ejt9q80pof@4ax.com>
Source record: 60953

On Wed, 26 Apr 2000 19:20:07 -0700, Brian Bennett <ve7ijq@hotmail.com>
wrote:

>I have a couple of old 10.515 GHz Gunnplexers I'm about to experiment
>with. There's a few articles around on biasing the Gunn diode and
>modulating it through a '317 on one wire and receiving through a
>separate coax from the detector diode. My question is, is it not
>possible to bias/transmit (voice..LF) to the Gunn diode and also
>receive (cap coupling to the receiver/detector diode) off the same
>coax?

If you're only doing audio level modulation, the answer is yes. If
you're doing high speed FSK data or video you may find the
non-linearities of the Gunn Diode to be a problem.

Most folks like to use separate coaxes for TX and RX because it makes
life simpler. However, you certainly can do what you suggest.

Have fun!

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

3549. Re: Tone board help, please.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: TC <cadigant2@uofs.edu>
Message-ID: <390E49A7.582D7D53@uofs.edu>
Source record: 60954
Cross-posted to: rec.radio.amateur.homebrew,uk.radio.amateur

Not sure about the specific board or chip, but if it is like other such boards, one need supply power (start of conservative with 5V+), ground the obvious ground plane and start exploring the other pins with a capacitor in series with a small audio amp or speaker.

If no tones are found, take the wire that me be "another V+" and tie it to 5V and search the other pins for audio output like above. If this does not work, now ground that same wire and search for tones again.

Most single chip CTCSS encoders are V+, ground, PTT (either + or - on the push to talk circuit), one pin out for audio, and the "other pins", which are grounded in different configurations to select the proper CTCSS tone. Even without any of the programming pins grounded, there should be a tone output, for no-connection is itself a selection of a tone.

This works for several different tone units I have found in Maxon HT's. Hopefully, someone will recognize your particular chip.

Good luck,
Tim Cadigan, (WC1F)

3550. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <390D9DE4.F5CB24E7@midwestmicro-tek.com>
Source record: 60955
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

As Michael suggested, if you can get away with ceramics Digi-key has
455kHz that has a BW of 4kHz. P# TK2330-ND, $2.65 quantity one.

Rick KC0GIX

Russ.Shaw wrote:

> Hi all,
>
> I'll make an 80m SSB transceiver, and possibly make it a kit,
> after i get a source of parts that don't cost too much.
>
> Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
> cost a lot?
>
> Apart from Amidon, are there any other sources of readily
> available toroids/IF-transformers?
>
> I'm aiming for 1-10W output, 455kHz single conversion, and
> battery-portable.
>
> --
> **
> * Russell Shaw, B.Eng, M.Eng(Research) *
> * Electronics Consultant *
> * email: russell@webaxs.net *
> * Australia *
> **

3551. Re: #BGY36 18 Watt VHF RF Amp Module.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <390df432.87404312@news.online.no>
Source record: 60956
Cross-posted to: sci.electronics.design,rec.radio.amateur.homebrew

On Mon, 01 May 2000 12:52:36 GMT, artky1k@ctel.net (K Sorter) wrote:

>Does anyone have specs and/or ap notes for a #BGY36 18 Watt 12 Volt
>VHF RF Power Linear Amp Module? It's not listed on the Phillips page,
>probably because it's not a current product.
>
>Write me direct please, and many thanks.
>
>Art
>
>
It seems to appeared on july 77, and details is shown in
Philips/semiconductors/part 6 - april 1982 - "RF power transitors and
modules".. it is an ordinary FM power module covering 148-174MHz -
will also operate within 144-146MHz band with - perhaps somewhat
reduced power output. Believe I used it for a project some years ago

what do you need to know? Sri, scanner is temporary disconnected at
the moment.

Jan-Martin
LA8AK

3552. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <390df51e.87640457@news.online.no>
Source record: 60957
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

On Mon, 01 May 2000 10:08:20 -0500, Rick Haub
<rhaub@midwestmicro-tek.com> wrote:

>As Michael suggested, if you can get away with ceramics Digi-key has
>455kHz that has a BW of 4kHz. P# TK2330-ND, $2.65 quantity one.
>
>Rick KC0GIX
>
>
>Russ.Shaw wrote:
>
>> Hi all,
>>
>> I'll make an 80m SSB transceiver, and possibly make it a kit,
>> after i get a source of parts that don't cost too much.
>>
>> Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
>> cost a lot?
>>
by the way, have you considered making a ladder filter using the cheap
color TV burst xtals - available on 3.58 or 4.43361875MHz?

73
Jan-Martin
LA8AK

3553. Icom U12 as a repeater?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: &retired0 <&retired0@hotmail.com>
Message-ID: <390E0EFB.63E9B8E3@hotmail.com>
Source record: 60958

I have an Icom IC-U12 that won't transmit and another
that won't receive. Throw in a mobile duplexer, a pic
processor,
some copper shield boxes,
a desire to build something and voila, a solar powered
repeater.

A little fiddling with the phase detector in the
synthesizer
and retuning on the image and they're on the ham band.

Because it's gonna be solar powered, I need to minimize
power
consumption. I plan to run the receiver in a mode similar
to
"battery save" by sampling the receiver every few seconds
and enabling the subtone decoder only when there's carrier.

I don't have the operator's manual. I don't suppose there's
already a battery save mode that I can just enable?
Has anybody got any experimental data on how long it takes
the synthesizer to stabilize and the receiver to come up
after power is applied? Any circuit mods to speed this up?
Ditto for the subtone decoder.

I already have one of these as a repeater receiver, but it's
AC powered and indoors, so I've no data on sampling
performance
or temperature performance.

Any other suggestions/experiences on using these in a
portable
repeater?

Learning from your experience would save me a lot of
experimentation.

Suggestions?
TIA
mike

3554. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: Gordon Wedman <gordwedman@attcanada.net>
Message-ID: <5qqP4.34491$Xk2.127150@tor-nn1.netcom.ca>
Source record: 60959
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

I have a B&K 501A hooked up to an old Tek scope and it works very well. I don't think you would need anything more sophisticated if you already have a scope that will work in X-Y mode. There is a 501A currently on Ebay at $35 with 37 hours left in the bidding.

Alan Douglas <adouglas@gis.net> wrote in message news:390b244f.6845632@news.newsguy.com...
> Hi,
> The B&K 501A was relatively inexpensive and works well. There were
> other brands also, made for radio-TV servicemen.
>
> 73, Alan

3555. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <390E452D.3FC7E5A4@rsccd.org>
Source record: 60960
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

" H. Peter Friedrichs" wrote:
>
> Hi to all:
>
> I have begun experimenting with some homemade (point contact)
> transistors.[snip]

> BTW, if you'd like to see a few pictures, check out these URLs:

> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif

> The last URL is a photomicrograph of the electrodes in the transistor
> shown in the first URL. If you are patient enough, look at 'em all.

Looks like a vampire spider sucking the life out of a helpless fly.

What an imagination. :o)

Have fun. But I would't try this at home, kiddies.

> Thanks in advance.
> Pete

3556. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <390E5617.2377@pop.removethistomailme.net>
Source record: 60961

NANCY GIANAKOPOULOS wrote:
>
> Hi everybody,
>
> A few days ago, I posted some information about
> ceramic filters, and also mentioned that I have a few receiver designs,
> product detector designs, etc. The response has been overwhelming to say
> the least, so to be able to cover all of the worldwide requests for this
> info, I need to somehow post the design, with schematics, board layouts, and
> specs in binary form. Are binary postings ok on this newsgroup, and if not,
> where can I post them for interested parties?

I couldn't care less personally, but some people do. There are also
propagation issues with binary attachments (i.e., some news servers drop
them automatically). Best thing to do is sign up at http://www.qsl.net
for a free ham radio home page, like mine (below). QSL.NET has really
made some dramatic improvements in reliability over the past year, and
there is no limit to the server space and bandwidth you're allowed to
consume, as long as it's radio-related.

> I do want to mention that
> this radio can be built for around 250 dollars or so, and the performance is
> pretty similar to some of the solid state Collins equipment that I have
> owned over the years. I am not looking for any compensation for this
> effort; it is just my of saying thanks to all of the people in the world who
> have helped me to get to where I am today. People like all of you!!!
>

Sounds like an FB project -- it'd be great to see more of this sort of
thing up on qsl.net.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3557. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <390E568E.4331@pop.removethistomailme.net>
Source record: 60962

NANCY GIANAKOPOULOS wrote:
>
> Hi everybody,
>
> A few days ago, I posted some information about
> ceramic filters, and also mentioned that I have a few receiver designs,
> product detector designs, etc. The response has been overwhelming to say
> the least, so to be able to cover all of the worldwide requests for this
> info, I need to somehow post the design, with schematics, board layouts, and
> specs in binary form. Are binary postings ok on this newsgroup, and if not,
> where can I post them for interested parties?

Just to clarify the foot-in-mouth post I just made, I should point out
that my use of the phrase "I couldn't care less" refers to my attitude
toward binary postings in the newsgroup, not your receiver project. :-)

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3558. EEPROM type on CMU161

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: "Robert M. Ganter" <hb9dnn@gmx.net>
Message-ID: <8enfpt$2rr$1@bw107zhb.bluewin.ch>
Source record: 60963

Hello,

does anyone know what type of EEPROM is used on the CMU161 memory module? This is the 200 channel memory used in various Standard Handheld Tranceivers (like the C558 or C520).
The CMU160 (the normal 40 channel module) contains a X24C04S, a 4kbit EEPROM from Xicor with I2C interface.
Using the same addressing (i.e. 7bit I2C addressing), an EEPROM up to 16kbit could be used. Assuming that all memory is used on the CMU160 (which is unlikely) a 32kbit EEPROM would be needed. If a 16kbit EEPROM is sufficient, the same addressing mode could be used (and I guess, this is how it works). If anybody knows, what chip is used here, let me know. I don't want to try out with an unknown chip and fry my handheld...

Any help is very appreciated.

73

Robert

--

Robert M. Ganter HB9DNN
/|\ |\
/_|_\|__ Sailing?
_____/ Why knot!

3559. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390CD321.5E72AEA3@webaxs.net>
Source record: 60964
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I'm always interested in seeing new circuits. I've been thinking of
doing a webpage for receiver designs.

NANCY GIANAKOPOULOS wrote:
>
> If anybody would like a copy of my latest 0-30MHz receiver design, which
> uses a DDS for the LO, feel free to give me a shout, and I will be glad to
> send you the schematics, free of charge.
>
> Pete Gianakopoulos
> Chicago, Il.
>

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3560. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390CD62B.9A70F9D1@webaxs.net>
Source record: 60965
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Hmm, i didn't know there were 'single' resonator units for 455kHz.
Does anyone know what the unloaded Q and frequency tolerance is like?

I figured that if i made a 2.5kHz BW, 1dB ripple cauer-tchebyshev
filter with 3 poles and two zeros using isolated resonators, the
highest unloaded Q i need is 1200. To make the same filter as a
passive ladder network, i'd probably need a Qu of 5000-10000. The
other problem is that the tolerance of resonator resonant frequency
is quite small.

I've thought of making my own resonator units using a glass marble
with ferrite slugs glued to opposite 'sides', coupled with dc-biased
coupling coils. Three separate resonator units would be lightly coupled
using small shunt inductances. However, its really too fiddly to use for
kit constructors. Also, difficult frequency trimming would be needed.

Michael Black wrote:
>
> Some people have speculated, and done some testing, in
> rec.radio.amateur.homebrew about using 455KHz ceramic resonators,
> which are cheap and fairly readily available, in ladder filters.
> Doing a search at http://www.dejanews.com will turn up some old
> posts about the idea.
>

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3561. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390CD72C.41055351@webaxs.net>
Source record: 60966
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I wanted to make the if strip using standard 455kHz if-transformers,
and more gain with fewer stages can be got at lower frequencies. I
can get 35-40dB gain from a BC548 transistor at 1mA using transformers,
and they're easier to get and have a nicer agc characteristic than ics
i know of.

Dale Parfitt wrote:
>
> Why not pick a higher IF frequency? This would allow for a lower freq
> VFO, and better image rejection. Then you could use inexpensive color
> burst or computer xtals for the filter.
>
> Dale W4OP

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3562. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-01 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390CD763.1C9E11D0@webaxs.net>
Source record: 60967
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Thanks, i'll check it out.

Eamon Skelton wrote:
>
> >Hi all,
> >
> >I'll make an 80m SSB transceiver, and possibly make it a kit,
> >after i get a source of parts that don't cost too much.
>
> CFJ455K5 2.4KHz at -6dB, 4.5KHz at -80dB.
>
> Details from the Cirkit catalogue for 1997.
>
> 73, Ed. EI9GQ.

--

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *

3563. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: David Milne <dmilne@camtech.net.au>
Message-ID: <390D9899.9FAEBE0@camtech.net.au>
Source record: 60968
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Fascinating....I never thought I'd see someone build their own transistor. Keep up the good work. Incidently, what did you use as semiconductor material, and how did you fabricate it? Have you doped it at all?

" H. Peter Friedrichs" wrote:

> Hi to all:
>
> I have begun experimenting with some homemade (point contact)
> transistors. Transistor action, while perfectly evident through current
> measurements, has become troublesome and tedious to with multiple meters
> and power supplies.
>
> What I'm really looking for is a curve tracer, specifically the modular
> type that can be connected to a common o-scope to to display curve
> families.
>
> Anyone out there have one collecting dust in their ham shack or storage
> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
> my address to email.
>
> BTW, if you'd like to see a few pictures, check out these URLs:
>
> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
> The last URL is a photomicrograph of the electrodes in the transistor
> shown in the first URL. If you are patient enough, look at 'em all.
>
> Thanks in advance.
>
> Pete

--
Regards

David Milne
ICQ 37590068

3564. Re: Low cost PCB manufacture

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: maddog@io.com
Message-ID: <390e406e.654721558@news.io.com>
Source record: 60969

On Tue, 18 Apr 2000 08:44:19 GMT, tusunov@my-deja.com wrote:

>In article <8d4t9ths1@nonews.col.hp.com>,
> Derek Toeppen <derekt@rosalie.col.hp.com> wrote:
>check http://run.to/pcb
>we make double side PTH, FR-4 1,6 mm (0,062") 160x100 mm (6,3x3,9")
>prototypes with solder mask and silkscreen component mark for only
>$26,00 in single quantity. shipment in 3-5 working days

Tsvetan:

May I make a suggestion? If you want to get business from the States (I see you're located in Bulgaria), post some verifiable (USA-based) references from satisfied customers (be sure to ask permission first)... somebody who we can call on the phone and find out first hand what kind of experience they had. There's a trust threshold that has to be overcome here, because us stateside folks have no recourse for getting our money back should things not be on the up-and-up.

Nonetheless, I wish you luck... we could really use a pcb supplier with good quality and low prices.

73,
monty N5FC

3565. 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <7atP4.33208$PV.2362618@bgtnsc06-news.ops.worldnet.att.net>
Source record: 60970

Hi everybody,

A few days ago, I posted some information about
ceramic filters, and also mentioned that I have a few receiver designs,
product detector designs, etc. The response has been overwhelming to say
the least, so to be able to cover all of the worldwide requests for this
info, I need to somehow post the design, with schematics, board layouts, and
specs in binary form. Are binary postings ok on this newsgroup, and if not,
where can I post them for interested parties? I do want to mention that
this radio can be built for around 250 dollars or so, and the performance is
pretty similar to some of the solid state Collins equipment that I have
owned over the years. I am not looking for any compensation for this
effort; it is just my of saying thanks to all of the people in the world who
have helped me to get to where I am today. People like all of you!!!

Pete Gianakopoulos
Chicago, Il

3566. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0205000103400001@usrh-5-178.hip.cam.org>
Source record: 60971
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

In article <390D9DE4.F5CB24E7@midwestmicro-tek.com>,
rhaub@midwestmicro-tek.com wrote:

> As Michael suggested, if you can get away with ceramics Digi-key has
> 455kHz that has a BW of 4kHz. P# TK2330-ND, $2.65 quantity one.
>
> Rick KC0GIX
>
>
Of course, the slope may be more immediately important than the actual
bandwidth.

If it was just a transmitter, one could use a relatively wide bandwidth
filter, indeed SSB isn't inherently narrow band, and keep the bandwidth
low by good audio filtering. Just as long as the filter is good enough
to chop off the unwanted sideband.

But since the filter is wanted for a transceiver, reception would be
affected by the relatively wide bandwidth. It probably wouldn't be
a consideration for limited use on the VHF bands, to get more SSB
activity going, but on HF it won't be so great. Again, one could
add good audio filtering on receive, but that will mess up the AGC
as in-channel signals affect the gain. Transmitting is a much more
controlled environment.

If you look in old articles about SSB rigs, there was a time when
LC filters were common for filtering. Using the IF coils out of
a Command Set (the one with the 85KHz IF) or some other pre-wound
coils, you could get good enough rejection if the IF was low enough.
That leads to problems with image of course.

I wonder how do-able it would be nowadays with toroids or pot-cores,
(or with terribly improved op-amps, how about an active filter around
50KHz or so?) and a conversion up to a frequency where a cheap and readily
available crystal filter would sit. I can put my hands on all
kinds of crystal filters in the HF range, but NBFM wide; all they
have to do is be narrow enough to get rid of the image from the
really low IF.

Michael VE2BVW

3567. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0205000049560001@usrh-5-178.hip.cam.org>
Source record: 60972
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

In article <qeXO4.2118$cO.12642@newsfeed.slurp.net>, "John"
<hydro@fx2.com> wrote:

> Hi Russ
> A easy to get source for 455 filters would be from Yaesu , Kenwood or
> Icom. They all use murata filters in there 455 IF . Good radios to look at
> would be , Kenwood 930 & 940. Yaesu Ft -102 , 757 (1000MP has a 2.7K wide
> murata filter in it's sub receiver) and many Icom's. You could buy them
> from the companies as parts for those radio's.
>
> 73's John

This isn't a new idea. Years ago, you'd see articles where the author
suggested buying a replacement filter for a homebrew project, or any part
for that matter (I recall someone buying all the parts for an HW-101 VFO
for
their own use).

But about 1974 or '75, when I needed an SSB filter for something, I called
up the local Heathkit outlet to find the price of a crystal filter used
in their SB line. It was fairly expensive for the time, and no bargain
over buying a filter intended for construction, like a KVG.

And then you look at the price of add-on filters from the company
selling the rig, and either they are giving it a tremendous markup, or
we have to expect to pay an awful lot for good filters.

On the other hand, since some people do replace the original filter with
a better one, one source of filters might be finding people who have
upgraded, though that is hardly a source of a lot of filters.

It's a shame that one of the smaller companies selling relatively low cost
equipment or kits doesn't offer SSB (and even CW) filters on the side
to the homebrew market. Since they are buying in quantity, presumably
the price would be low. Sales to the homebrew market would hardly cut
into sales of their complete rigs, but it would be a source of filters
for those who want to build their own.

Or talk a company already selling parts, such as Dan's Small Parts, into
carrying some sort of relatively low cost filter.

Michael VE2BVW

3568. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: cooperjim@aol.com
Message-ID: <20000502022222.09306.00000784@ng-fq1.aol.com>
Source record: 60973

Hi Pete

WOW!
Do you have any further information?
What are you using for the semiconductor and the whiskers?
This would make a nice article for QEX or QST.

73
Jim Cooper NE6O
CooperJim@aol.com

3569. WTB:Keyer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: am502@freenet.hamilton.on.ca
Message-ID: <8em9es$a5j$1@mohawk.hwcn.org>
Source record: 60974

I am looking for a used keyer to practice Code. If anything is available
please drop me a line.
Thanks
Doug
VE3 DGH

--

3570. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8emlpjodu2@ausnews.austin.ibm.com>
Source record: 60975
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

In <390A60DA.8AF23F0C@azstarnet.com>, " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com> writes:
>Hi to all:
>
>I have begun experimenting with some homemade (point contact)
>transistors. Transistor action, while perfectly evident through current
>measurements, has become troublesome and tedious to with multiple meters
>and power supplies.
>
>What I'm really looking for is a curve tracer, specifically the modular
>type that can be connected to a common o-scope to to display curve
>families.
>
>Anyone out there have one collecting dust in their ham shack or storage
>closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>my address to email.
>
>BTW, if you'd like to see a few pictures, check out these URLs:
>
>http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>
>The last URL is a photomicrograph of the electrodes in the transistor
>shown in the first URL. If you are patient enough, look at 'em all.
>
>Thanks in advance.
>
>Pete
>

Nice job! How much gain are you getting? Any idea of the frequency response?

With a reasonably good lab/data card for a PC, you could probably write a software curve tracer for a PC. I'm envisioning a D-to-A output to drive the base, a D-to-A output to supply the collector voltage, and an A-to-D stage to measure the collector current.

With the PC, you'd have the data in any form you wanted. You could have it printed out in tables, or you could use it to drive a plotting routine to display it on the screen (or, even on a printer).

Good luck with it, and please keep us informed. Thanks!

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3571. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8emme0odu3@ausnews.austin.ibm.com>
Source record: 60976
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

In <390D9899.9FAEBE0@camtech.net.au>, David Milne <dmilne@camtech.net.au> writes:
>Fascinating....I never thought I'd see someone build their own transistor.
>Keep up the good work. Incidently, what did you use as semiconductor
>material, and how did you fabricate it? Have you doped it at all?
>
>" H. Peter Friedrichs" wrote:
>
>> Hi to all:
>>
>> I have begun experimenting with some homemade (point contact)
>> transistors. Transistor action, while perfectly evident through current
>> measurements, has become troublesome and tedious to with multiple meters
>> and power supplies.
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>> What I'm really looking for is a curve tracer, specifically the modular
>> type that can be connected to a common o-scope to to display curve
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>> Anyone out there have one collecting dust in their ham shack or storage
>> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>> my address to email.
>>
>> BTW, if you'd like to see a few pictures, check out these URLs:
>>
>> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>>
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>>
>> Thanks in advance.
>>
>> Pete
>
>--
>Regards
>
>David Milne
>ICQ 37590068
>

>

I know that it's possible to take a power transistor in a TO-3 package, and, with the careful use of a cutting tool (Dremel, hacksaw, etc.), to cut the top off of the package. This exposes the silicon wafer.

Once the silicon wafer is exposed, it is somewhat light sensitive (e.g., phototransistor).

Would it be possible to use the collector area of the wafer as the substrate for a point contact transistor? Or, would the oxide coating be too thick to puncture? What type of wires would be the best to use?

I remember that the original transistor was developed by accident while trying to make a low noise diode (I think the actual scenario was that a third electrode was added to a diode, and it was noticed that current flow between the electrodes were related, indicating an amplifying effect.).

What semiconductor materials would be good to make transistors from? Obviously, silicon and germanium will work. What about GaAs (Very poisonous!)? What about some of the other materials that used to be used for point contact diodes, such as galena?

What other types of solid state devices could be constructed? Could you fabricate your own FETs? What about UJTs (UniJunction Transistors)? SCRs and other four layer devices are probably out of the question. Could a MOSFET be fabricated?

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3572. Re: Mobile Power Connection 96 Chev Blazer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: Jim Allen <jmallen@altavista.net>
Message-ID: <8emov6$gl5$1@slb7.atl.mindspring.net>
Source record: 60977
Cross-posted to: rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Lottoman <lottoman@skypoint.com> wrote in message
news:8eftbi$3057$1@shadow.skypoint.net...
> Anyone have any ideas for running a power cable from the battery to inside
> the passenger compartment on a 96' Chevy Blazer?
>
> Thanks in advance!!
>
>

If I remember correctly, the '96 Blazer was the same body style as the '89-'98 pickups. Working in a LMRS shop, I've punched and grommeted holes in the passenger side of the transmission hump (on the vertical riser) with some success (fairly quick, but you get "greased" by the undercarriage - so that's the "quick and dirty method"). On my own '91 Silverado; I didn't want to try that - wanted to keep spinning drill bits away from the 3-day old clutch slave cylinder. I found that the broadcast radio antenna coax went out through a HUGE THICK grommet just below the A/C evaporator box on the passenger side firewall. It took some time, but I managed to pull two #10 stranded lines out to the power buss next to the A/C dryer without cutting into the grommet; just "stuffed and cussed" it through with the antenna lead.

Before anybody starts yelling: 1.) Yes, stray RFI could be coupled from the new power leads onto the coax shield; if repeat IF you aren't using some kind of noise choke on the power. My thought's (and my Elmer's at the shop) was that strange noises on the stereo were preferable to erratic operation of the ABS system should go out the driver's side. 2.) That power buss is where the high-amp accessories and the alternator are connected to the battery. This almost guarantees the need for a noise filter on the radio lines; but is a much cleaner location to tie down the B+ leads. I've powered much gear from those points, 75W Micors, MASTR II - based IMTS rigs, solid state HF amps. My own gear has been powered from that point since July '91 with virtually no problems - can't say *zero trouble* - when one of the diodes gave up in my alternator, the chokes couldn't keep the ringing noise out of 6M TX with the brick on. Since it also didn't charge the battery properly, I just decided to replace the alternator. Problem solved.

Jim Allen
KC7BDP

"Empirical data derived by the author may not necessarily be duplicated by the reader. Posted mileage figures are typical, your mileage may vary. Professional driver on closed course. etc., etc."

3573. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: choronzon@gmx.de
Message-ID: <390f0bd6.8185196@news.comundo.de>
Source record: 60978
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

I�ve seen a recipe for making a transistor out of ald coins and
electrolyte recently, but I�m not sure if it�s a joke. COULD work,
as you can make rectifiers from surprisingly primitive things!!

I�ll try when I get hold of a copy.

I also have some small article from I think the 60s on how to make a
transistor. If someone`s interested, tell me an appropriate place
where I can post the binary of the scan!

On 2 May 2000 13:49:52 GMT, glass2@glass2.lexington.ibm.com wrote:

>In <390D9899.9FAEBE0@camtech.net.au>, David Milne <dmilne@camtech.net.au> writes:
>>Fascinating....I never thought I'd see someone build their own transistor.
>>Keep up the good work. Incidently, what did you use as semiconductor
>>material, and how did you fabricate it? Have you doped it at all?
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>>> Hi to all:
>>>
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>>> and power supplies.
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>>> What I'm really looking for is a curve tracer, specifically the modular
>>> type that can be connected to a common o-scope to to display curve
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>>> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>>> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>>> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
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>>Regards
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>>David Milne
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>top off of the package. This exposes the silicon wafer.
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>SCRs and other four layer devices are probably out of the question.
>Could a MOSFET be fabricated?
>
>Dave
>
>P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>

3574. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: Ren Tescher <rjtescher@netscape.net>
Message-ID: <390F0E86.AE9F9C5F@netscape.net>
Source record: 60979
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

hey, Hey, HEY!
He's only made ONE (or so) transistor!
He's a long way from having enough to make a PC!

B^)

Ren
dona nobis pacem

glass2@glass2.lexington.ibm.com wrote:

> Nice job! How much gain are you getting? Any idea of the frequency response?
>
> With a reasonably good lab/data card for a PC, you could probably write a
> software curve tracer for a PC. I'm envisioning a D-to-A output to drive the
> base, a D-to-A output to supply the collector voltage, and an A-to-D stage
> to measure the collector current.
>
> With the PC, you'd have the data in any form you wanted. You could have it
> printed out in tables, or you could use it to drive a plotting routine to
> display it on the screen (or, even on a printer).
>
> Good luck with it, and please keep us informed. Thanks!
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3575. Wanted: HomeBrewer Links

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <390F1FB8.E8CBA545@email.mot.com>
Source record: 60980

I'm always glad to add links to Hamradio Homebrew Sites on my
Web Page http://www.mbn.net/kd9jq/hamradio

If you have what you think is a relevant site for homebrewing
or know of a site let me know at:

mailto:kd9jq@rsg.org

73 Chuck KD9JQ

3576. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: tmelcon@mit.edu
Message-ID: <8enems$720$1@decurion.mit.edu>
Source record: 60981

In article <7atP4.33208$PV.2362618@bgtnsc06-news.ops.worldnet.att.net>,
NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net> wrote:
>specs in binary form. Are binary postings ok on this newsgroup, and if not,
>where can I post them for interested parties? I do want to mention that

The suggestion to put them on a web page is perhaps the best answer,
as that would make them available for people to see in the future as
well. If you do want to post them, the standard procedure is something
like this:

1. Post the pictures to a miscellaneous binaries group (such as
alt.binaries.misc).

2. Announce on this newsgroup that you have posted the binaries on
alt.binaries.misc (or some other group if you use it), and say what
the subject line of the post is so that people can search for your
message in the thousands of messages on the group.

It's a bit of a bother, but it is the standard way of posting binaries
for groups that don't have dedicated binaries groups associated with
them.

3577. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <CiIP4.44686$fV.2795432@bgtnsc05-news.ops.worldnet.att.net>
Source record: 60982

This sounds like a good idea; I will start the mechanisms rolling!

Pete

John Miles <jmiles@pop.removethistomailme.net> wrote in message
news:390E5617.2377@pop.removethistomailme.net...
> NANCY GIANAKOPOULOS wrote:
> >
> > Hi everybody,
> >
> > A few days ago, I posted some information about
> > ceramic filters, and also mentioned that I have a few receiver designs,
> > product detector designs, etc. The response has been overwhelming to
say
> > the least, so to be able to cover all of the worldwide requests for this
> > info, I need to somehow post the design, with schematics, board layouts,
and
> > specs in binary form. Are binary postings ok on this newsgroup, and if
not,
> > where can I post them for interested parties?
>
> I couldn't care less personally, but some people do. There are also
> propagation issues with binary attachments (i.e., some news servers drop
> them automatically). Best thing to do is sign up at http://www.qsl.net
> for a free ham radio home page, like mine (below). QSL.NET has really
> made some dramatic improvements in reliability over the past year, and
> there is no limit to the server space and bandwidth you're allowed to
> consume, as long as it's radio-related.
>
> > I do want to mention that
> > this radio can be built for around 250 dollars or so, and the
performance is
> > pretty similar to some of the solid state Collins equipment that I have
> > owned over the years. I am not looking for any compensation for this
> > effort; it is just my of saying thanks to all of the people in the world
who
> > have helped me to get to where I am today. People like all of you!!!
> >
>
> Sounds like an FB project -- it'd be great to see more of this sort of
> thing up on qsl.net.
>
> -- jm
>
> ----------

> http://www.qsl.net/ke5fx
> Note: My E-mail address has been altered to avoid spam
> ----------

3578. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <gvIP4.9706$sB3.6657@news.indigo.ie>
Source record: 60983

>Hi everybody, <snip>
>Are binary postings ok on this newsgroup, and if not,
>where can I post them for interested parties?

>Pete Gianakopoulos
>Chicago, Il

It is not a good idea to post binaries to a discussion newsgroup.
I suggest you put the information on a web page. I agree with John Miles' recommendation of qsl.net. Their web and ftp servers are fast and reasonably reliable. My own web page is on qsl.net. I'm looking forward to seeing your design.

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3579. EI9GQ homebrew radio page

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <4kJP4.9740$sB3.6674@news.indigo.ie>
Source record: 60984
Cross-posted to: uk.radio.amateur,rec.radio.amateur.homebrew

EI9GQ homebrew radio page.

New HF transceiver project.

http://www.qsl.net/ei9gq

73, Ed. EI9GQ

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3580. Re: NEW WORLD WIDE VOICE TEXT CHAT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: primetim@frontiernet.net
Message-ID: <8ennuf$3cao$1@node17.cwnet.frontiernet.net>
Source record: 60985
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

In article <%L1P4.11111$g4.321955@newsread2.prod.itd.earthlink.net>, "MITBR"
<mitbr@earthlink.net> wrote:
>Hello!!
> I have a web page dedicated to the radio hobby here in Tampa Bay
>Florida. I am in the process of launching a new audio chat network on a
>channel for amateur radio enthusiasts. The idea is for webmasters to put the
>small html code somwhere on their amateur radio web page which would be
>linked all together worldwide. The system utilizes the new HearMe plugin
>which is a small 80k or so program new visitors of the amateur radio audio
>chat would download upon landing on the page which has the html code for the
>plugin. Please let me know if you decide to use the system so I can add your
>site to my links page to let others know your site is connected to the
>network. For a demonstration of the system you may email me for a time and
>date so you can see it in action. To get the html code please visit my web
>site below. To get further info on the HearMe requirments to have it work
>click on the help are for Hear Me on my web site. I am in no way affiliated
>with HearMe and my web site is a noncomercial page.You may also visit my
>radio page at the url below from 7pm to 8pm eastern time every day I try to
>be in my scanner audio chat at that time. I look forward to hearing from.
>Thankyou
>Best Regards
>Tim Breckon--
>Please visit my web site url below
>Tampa Bay Radio Page
>http://home.earthlink.net/~mitbr/Mi01000.htm
>

I thought that's what RADIOS were for?
>

3581. Antenna technology breakthrough

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-02 00:00:00 UTC
From: Carl Clawson <cclawson@transport.com>
Message-ID: <wsKP4.22832$le5.3291507@news-west.usenetserver.com>
Source record: 60986

http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1#bsum

Oh, and it also causes "accelerated plant growth." Must be the lamp.
Carl WS7L

3582. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: egriffin@vnet.net
Message-ID: <3910129c.3115027@news.vnet.net>
Source record: 60895
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

I am currently looking for sources
>for fiberglass mast. I am also looking for 500~1000pF 2000V variable capacitor.
>Christopher VE3UVT

Check with Allen at Max-Gain Systems. They have the mast .....and
lots of old parts, so they may have the capacitor too. Their URL is
www.mgs4u.com

73
Ed
KMA Antennas
KMA Antennas
VHF - UHF - HF log periodics
http://www.qsl.net/w4kma

Dayton fleamarket spaces
2828 - 2831

3583. Re: NEW WORLD WIDE VOICE TEXT CHAT

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Charles Brabham <n5pvl@texoma.net>
Message-ID: <8ep5hi11fei@enews4.newsguy.com>
Source record: 60896
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space

primetime <primetim@frontiernet.net> wrote in message
news:8ennuf$3cao$1@node17.cwnet.frontiernet.net...
> In article <%L1P4.11111$g4.321955@newsread2.prod.itd.earthlink.net>,
"MITBR" <mitbr@earthlink.net> wrote:
> >Hello!!
> > I have a web page dedicated to the radio hobby here in Tampa Bay
> >Florida. I am in the process of launching a new audio chat network on a

> snip <
>
> I thought that's what RADIOS were for?
> >

Good point!

You hit the nail exactly on the head.

--

73 DE Charles Brabham, N5PVL
N5PVL @ N5PVL.#NTX.TX.USA.NOAM
http://www.texoma.net/~n5pvl

3584. Re: First receiver kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39103C1E.29FCE525@midwestmicro-tek.com>
Source record: 60897

I just built the Ten Tec this last weekend. It was a lot of fun. I would suggest two things.

One, you can optionaly install a resonate circuit that will increase the sensitivity of the receiver, install it.

Two, the Ten Tec, like a lot of inexpensive kits, is not scaled and it is difficult for beginners (like me) to know where you're at in the band. If you have or can barrow a radio frequency meter like the one Radio Shack sells you can hold the antenna close to the receiver circuit to get an idea where you are tuned to.

Regens can be tricky but with some practice you should be able to pick up good signals. I've been able to pick up a lot of commercial stations from Japan to Germany. I have not yet, however, been able to pick up any ham signals.

Chris Dorn wrote:

> Hello,
> I apologize if this topic has been covered to death. I am interested to
> build a receiver as a first kit effort. I am trying to decide between the
> Ten Tec 1253 or the Ramsey SR-1. I am leaning toward the Ramsey given
> that it is a superhet, and it is available at my local ham store. I don't
> mind that it is limited freq coverage. My goal is to spend modest funds
> to gain experience for a more advanced kit such as the TT 1254. Would the
> Ramsey be a decent choice? Are there any other options I could consider
> as a beginner? Thanks for your patience, and any advice appreciated.
>
> Regards,
> Chris VE6RDC

3585. Re: First receiver kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39103D8E.5044EE5D@midwestmicro-tek.com>
Source record: 60898

In my post to Chris I noted to him that I am unable to pick up ham (CW or SSB) signals with my Ten Tec. I can pick up powerful commercial stations pretty well though so I know my receiver is working. I can tune through the ham band and pick up the "whistles" but I can't seem to resolve them.

Is it critical to have the radio grounded? It isn't but I could run a wire to a cold water pipe. I have not done so yet because I'd have to run the wire about 30 feet and then through a wall. Any ideas?

Thanks

Rick KC0GIX

Norm Melick wrote:

> Forget the SR-1. I've built the SR-1 and the Ten Tec's. If
> you want an exercise in futility, build the SR-1. The
> design sucks, and you'll be lucky to receive much of
> anything. For example, the circuit they use for the audio
> amp (LM386) is just plain wrong.
>
> If you want a real nice regen, that hears great, with a nice
> design, build the Ten Tec. If you are afraid about the
> complexity, you might consider the T-kit 1054, a 4 band SWL
> receiver. That being said, the Ten Tec 1253 is really not
> that hard to put together. Just follow the directions.
>
> The folks at Ten Tec are really nice to deal with, very
> knowledgeable of their product, and the customer support is
> great. They've sent me replacement parts, no charge, when I
> offered to pay for them. They wouldn't hear of it. The
> 1254 is expensive, in my opinion, but someday I hope to be
> able to afford one. It's a real nice kit. Heck, if you've
> got the money now, get the 1254! I'll bet you could build
> it with no problem.
>
> In any event, go for the Ten Tec, you won't be sorry.
>
> Norm/KQ6SD

3586. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Donald R Montgomery <donrm@sr.hp.com>
Message-ID: <8eqaj9$8ir$1@nirvana.sr.hp.com>
Source record: 60899

Robert Fanfant <fanfant@ix.netcom.com> wrote:
> QST did a technical review of this radio a couple of months ago...Bottom
> line was that the K2 had performance numbers of rigs in the $2000 - $3500
> range. Worth checking out.

The QST article also had some web paths to discussions of the K2 -
you might want to check it out.

Don K6LTS
donrm@sr.hp.com

3587. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3910F28C.1112C70C@azstarnet.com>
Source record: 60900
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Sorry for the belated response...I've been out of town.

The semiconductor is a chip of germanium stolen from a 1N34. Phosphor bronze electrodes, sharpened to extreme pinpoints, touch the face of the crystal with a spacing on the order of 0.002" The germanium is N-type, the P junction is formed by virtue of the electrode draining off free electrons. Conductivity is enhanced by a "forming" process wherein a small capacitor, charged from 45-90 volts, is dumped into the junction to cause extreme, localized heating. (something happens to the crystal structure, I'm led to believe.) To be honest, I don't fully understand the effects of the latter process yet, but the improvements are evident.

As to my motives, I recently published a book called "The Voice Of The Crystal". If you get QST, check out the May issue, page 41, for a review that I'm quite proud of. VOTC is a book about "from scratch" construction of radio components including coils, rotary variable capacitors, detectors, and several high-impedance "headphones" utilizing shoe-polish tins, transformer laminations, and even piezo cigarette lighter parts. The end result was simple, functional (crystal) radio equipment built from homebrew parts. Of course, a logical sequel to this involves amplification, through the use of homemade tubes and transistors, no?

Pete

David Milne wrote:

> Fascinating....I never thought I'd see someone build their own transistor.
> Keep up the good work. Incidently, what did you use as semiconductor
> material, and how did you fabricate it? Have you doped it at all?
>
> " H. Peter Friedrichs" wrote:
>
> > Hi to all:
> >
> > I have begun experimenting with some homemade (point contact)
> > transistors. Transistor action, while perfectly evident through current
> > measurements, has become troublesome and tedious to with multiple meters
> > and power supplies.
> >
> > What I'm really looking for is a curve tracer, specifically the modular
> > type that can be connected to a common o-scope to to display curve
> > families.
> >
> > Anyone out there have one collecting dust in their ham shack or storage
> > closet? Willing to part with it for a reasonable sum? Remove NOSPAM from

> > my address to email.
> >
> > BTW, if you'd like to see a few pictures, check out these URLs:
> >
> > http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> > http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> > http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> > http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> > http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
> >
> > The last URL is a photomicrograph of the electrodes in the transistor
> > shown in the first URL. If you are patient enough, look at 'em all.
> >
> > Thanks in advance.
> >
> > Pete
>
> --
> Regards
>
> David Milne
> ICQ 37590068

3588. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3910F35F.16D431F7@azstarnet.com>
Source record: 60901
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

I'd appreciate it *very much* if you'd forward a copy to me (just remove NOSPAM from my email address).

From what I've read, both copper oxides and sulfides exhibit semiconductor properties, and were the basis for a "transistor" patent filed by a guy named Lilienfeld as far back as the mid 1920's. Did the recipe specify pennies?

Pete

Andrew Steven Dixon wrote:

> Iï¿½ve seen a recipe for making a transistor out of ald coins and
> electrolyte recently, but Iï¿½m not sure if itï¿½s a joke. COULD work,
> as you can make rectifiers from surprisingly primitive things!!
>
> Iï¿½ll try when I get hold of a copy.
>
> I also have some small article from I think the 60s on how to make a
> transistor. If someone`s interested, tell me an appropriate place
> where I can post the binary of the scan!
>
> On 2 May 2000 13:49:52 GMT, glass2@glass2.lexington.ibm.com wrote:
>
> >In <390D9899.9FAEBE0@camtech.net.au>, David Milne <dmilne@camtech.net.au> writes:
> >>Fascinating....I never thought I'd see someone build their own transistor.
> >>Keep up the good work. Incidently, what did you use as semiconductor
> >>material, and how did you fabricate it? Have you doped it at all?
> >>
> >>" H. Peter Friedrichs" wrote:
> >>
> >>> Hi to all:
> >>>
> >>> I have begun experimenting with some homemade (point contact)
> >>> transistors. Transistor action, while perfectly evident through current
> >>> measurements, has become troublesome and tedious to with multiple meters
> >>> and power supplies.
> >>>
> >>> What I'm really looking for is a curve tracer, specifically the modular
> >>> type that can be connected to a common o-scope to to display curve
> >>> families.
> >>>
> >>> Anyone out there have one collecting dust in their ham shack or storage
> >>> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
> >>> my address to email.

> >>>
> >>> BTW, if you'd like to see a few pictures, check out these URLs:
> >>>
> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> >>> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
> >>>
> >>> The last URL is a photomicrograph of the electrodes in the transistor
> >>> shown in the first URL. If you are patient enough, look at 'em all.
> >>>
> >>> Thanks in advance.
> >>>
> >>> Pete
> >>
> >>--
> >>Regards
> >>
> >>David Milne
> >>ICQ 37590068
> >>
> >>
> >
> >I know that it's possible to take a power transistor in a TO-3 package, and,
> >with the careful use of a cutting tool (Dremel, hacksaw, etc.), to cut the
> >top off of the package. This exposes the silicon wafer.
> >
> >Once the silicon wafer is exposed, it is somewhat light sensitive (e.g.,
> >phototransistor).
> >
> >Would it be possible to use the collector area of the wafer as the substrate
> >for a point contact transistor? Or, would the oxide coating be too thick
> >to puncture? What type of wires would be the best to use?
> >
> >I remember that the original transistor was developed by accident while
> >trying to make a low noise diode (I think the actual scenario was that
> >a third electrode was added to a diode, and it was noticed that current
> >flow between the electrodes were related, indicating an amplifying effect.).
> >
> >What semiconductor materials would be good to make transistors from? Obviously,
> >silicon and germanium will work. What about GaAs (Very poisonous!)? What
> >about some of the other materials that used to be used for point contact
> >diodes, such as galena?
> >
> >What other types of solid state devices could be constructed? Could you
> >fabricate your own FETs? What about UJTs (UniJunction Transistors)?
> >SCRs and other four layer devices are probably out of the question.
> >Could a MOSFET be fabricated?
> >

> >Dave
> >
> >P.S. Standard Disclaimer: I work for them, but I don't speak for them.
> >

3589. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3910F728.F701AF5B@azstarnet.com>
Source record: 60902
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Very true. Alas, one must choose his battles.

Building my own curve tracer, either from pieces and parts, through the use of a computer and various
I/O cards, or even a little PIC-based device sounds fun and exciting. It's doable, and well within my
skillset on all accounts. The trouble is that my free time is *very* limited, and I can either spend
it on a tangent building a neat tool, or try to the obtain that tool through more direct means, and
maintain my focus on the actual project at hand.

I agree that ideally, the computer solution *would* be the best. You can collect data, slam the
numbers into a spreadsheet, and chart 'em at will.

As to specifications on my transistors, I have no formal specs, yet. I have probably set up a dozen or
more crystal/electrode sets in the three housings depicted, and destroyed them all exploring the
limits of junction voltages. Gain is impacted by factors like electrode spacing, electrode pressure,
electrode geometry, and factors relating to the crystal die itself.

Speaking of destroying transistors, preparing the electrodes is a painstaking process, only recently
made easier through the procurement of a microscope. (The electrodes you saw in the photomicrograph
were prepared using a simple jeweler's loupe. I may now be permanently cross-eyed!)

glass2@glass2.lexington.ibm.com wrote:

> In <390A60DA.8AF23F0C@azstarnet.com>, " H. Peter Friedrichs"
<NOSPAMpfriedr@azstarnet.com> writes:
> >Hi to all:
> >
> >I have begun experimenting with some homemade (point contact)
> >transistors. Transistor action, while perfectly evident through current
> >measurements, has become troublesome and tedious to with multiple meters
> >and power supplies.
> >
> >What I'm really looking for is a curve tracer, specifically the modular
> >type that can be connected to a common o-scope to to display curve
> >families.
> >

> >Anyone out there have one collecting dust in their ham shack or storage
> >closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
> >my address to email.
> >
> >BTW, if you'd like to see a few pictures, check out these URLs:
> >
> >http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> >http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> >http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> >http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> >http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
> >
> >The last URL is a photomicrograph of the electrodes in the transistor
> >shown in the first URL. If you are patient enough, look at 'em all.
> >
> >Thanks in advance.
> >
> >Pete
> >
>
> Nice job! How much gain are you getting? Any idea of the frequency response?
>
> With a reasonably good lab/data card for a PC, you could probably write a
> software curve tracer for a PC. I'm envisioning a D-to-A output to drive the
> base, a D-to-A output to supply the collector voltage, and an A-to-D stage
> to measure the collector current.
>
> With the PC, you'd have the data in any form you wanted. You could have it
> printed out in tables, or you could use it to drive a plotting routine to
> display it on the screen (or, even on a printer).
>
> Good luck with it, and please keep us informed. Thanks!
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3590. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3910F7EE.8F69AC25@azstarnet.com>
Source record: 60903
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

You *mock* me?! Wait 'till you see my design for a discrete-component pentium processor, fabricated entirely from galena-based point contact transistors! heh heh heh

Pete ;)

Ren Tescher wrote:

> hey, Hey, HEY!
> He's only made ONE (or so) transistor!
> He's a long way from having enough to make a PC!
>
> B^)
>
> Ren
> dona nobis pacem
>
> glass2@glass2.lexington.ibm.com wrote:
>
> > Nice job! How much gain are you getting? Any idea of the frequency response?
> >
> > With a reasonably good lab/data card for a PC, you could probably write a
> > software curve tracer for a PC. I'm envisioning a D-to-A output to drive the
> > base, a D-to-A output to supply the collector voltage, and an A-to-D stage
> > to measure the collector current.
> >
> > With the PC, you'd have the data in any form you wanted. You could have it
> > printed out in tables, or you could use it to drive a plotting routine to
> > display it on the screen (or, even on a printer).
> >
> > Good luck with it, and please keep us informed. Thanks!
> >
> > Dave
> >
> > P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3591. FA. Old HV relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <390F7892.A15192AA@home.com>
Source record: 60987

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=323444139

3592. FA Old HV relay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <390F80C7.41C8934F@home.com>
Source record: 60988

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=323444139

3593. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <390F8FEE.9A91F848@webaxs.net>
Source record: 60989
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I know all about ladder filter design, and will do it if i find 455kHz ceramic resonators with suitably high Q and frequency tolerance.

The main reason for a 455kHz if is so that 'standard' 455kHz transformers can be used, and you can get more gain with less stages. I'm making the receiver compact/battery-portable, but without compromises.

Also, it'll have 10Hz step synthesized vfo, but not using a power-hungry/noisy dds.

J M Noeding wrote:
>
> by the way, have you considered making a ladder filter using the cheap
> color TV burst xtals - available on 3.58 or 4.43361875MHz?
>
> 73
> Jan-Martin
> LA8AK

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3594. First receiver kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: dorn@freenet.edmonton.ab.ca
Message-ID: <8eo71v$d2u$1@pulp.srv.ualberta.ca>
Source record: 60990

Hello,
I apologize if this topic has been covered to death. I am interested to build a receiver as a first kit effort. I am trying to decide between the Ten Tec 1253 or the Ramsey SR-1. I am leaning toward the Ramsey given that it is a superhet, and it is available at my local ham store. I don't mind that it is limited freq coverage. My goal is to spend modest funds to gain experience for a more advanced kit such as the TT 1254. Would the Ramsey be a decent choice? Are there any other options I could consider as a beginner? Thanks for your patience, and any advice appreciated.

Regards,
Chris VE6RDC

3595. HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Christopher An <christopher_an@sympatico.ca>
Message-ID: <390FA2E0.9C8E8DAA@sympatico.ca>
Source record: 60991
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

Hi,

Thank you for reading this posting. I am currently looking for sources for fiberglass mast. The length does not have to be long. The size I am looking for is about 5 feet long (or longer). Strength might be a concern because I am using it in high wind area. If you know any place that I can find those, I'd like to share it with you and will appreciate your help. I am also looking for 500~1000pF 2000V variable capacitor.

Thanks for reading and 73,

Christopher VE3UVT

3596. Re: First receiver kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Norm Melick <henmel@worldnet.att.net>
Message-ID: <390FB453.D3D3B425@worldnet.att.net>
Source record: 60992

Forget the SR-1. I've built the SR-1 and the Ten Tec's. If you want an exercise in futility, build the SR-1. The design sucks, and you'll be lucky to receive much of anything. For example, the circuit they use for the audio amp (LM386) is just plain wrong.

If you want a real nice regen, that hears great, with a nice design, build the Ten Tec. If you are afraid about the complexity, you might consider the T-kit 1054, a 4 band SWL receiver. That being said, the Ten Tec 1253 is really not that hard to put together. Just follow the directions.

The folks at Ten Tec are really nice to deal with, very knowledgeable of their product, and the customer support is great. They've sent me replacement parts, no charge, when I offered to pay for them. They wouldn't hear of it. The 1254 is expensive, in my opinion, but someday I hope to be able to afford one. It's a real nice kit. Heck, if you've got the money now, get the 1254! I'll bet you could build it with no problem.

In any event, go for the Ten Tec, you won't be sorry.

Norm/KQ6SD

3597. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Yechman Fershimilt <osprine@plobus.net>
Message-ID: <jnTP4.2134$24.80275@news7.onvoy.net>
Source record: 60993
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

I find all my fiberglass needs at: http://www.mgs4u.com/

Christopher An <christopher_an@sympatico.ca> wrote in message
news:390FA2E0.9C8E8DAA@sympatico.ca...
> Hi,
>
> Thank you for reading this posting. I am currently looking for sources
> for fiberglass mast. The length does not have to be long. The size I
> am looking for is about 5 feet long (or longer). Strength might be a
> concern because I am using it in high wind area. If you know any place
> that I can find those, I'd like to share it with you and will appreciate
> your help. I am also looking for 500~1000pF 2000V variable capacitor.
>
> Thanks for reading and 73,
>
> Christopher VE3UVT
>

3598. looking for SSB40M transceivers shematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-03 00:00:00 UTC
From: Laurent CHABERT <Laurent.chabert@imag.fr>
Message-ID: <3910112A.6DB4@imag.fr>
Source record: 60994

HELLO,
I am a french OM (F4 AER)
as a am working on "the best design" for a cheap but
efficient SSB transceiver,As it is better to improve than to discover
things existings, I am looking for every schematics
concerning: SSB; IF amplifiers; ladder quartz filter for SSB,
using common components like NE612, MC1350P, PIC 16F84.
PA from 5 to 50 W using cheap transistors; SSB KITS descriptions,
synthetiseur PLL or DDS with PIC for exemple.

I am sending IRC's to cover the cost of your copy and postage
if you cant send me file or links

Many thanks,

Laurent

3599. Re: Antenna technology breakthrough

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: meir menes <meirmenes@earthlink.net>
Message-ID: <Ej3Q4.24011$x4.733562@newsread1.prod.itd.earthlink.net>
Source record: 60904

Carl Clawson <cclawson@transport.com> wrote in message
news:wsKP4.22832$Ie5.3291507@news-west.usenetserver.com...
> http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1#bsum
>
> Oh, and it also causes "accelerated plant growth." Must be the lamp.
> Carl WS7L
>
>
>
Is this a delayed April Fool joke?
>
>
>
>
>
>
>
>

3600. Re: First receiver kit?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Norm Melick <henmel@worldnet.att.net>
Message-ID: <3910D9DB.B0FDFF0B@worldnet.att.net>
Source record: 60905

Rick Haub wrote:
>
> In my post to Chris I noted to him that I am unable to pick up ham (CW
> or SSB) signals with my Ten Tec. I can pick up powerful commercial
> stations pretty well though so I know my receiver is working. I can tune
> through the ham band and pick up the "whistles" but I can't seem to
> resolve them.

I'm not quite sure what you mean by "powerful commercial stations", but if you mean BBC, etc., then yes, your receiver is working correctly. If you mean that you are only picking up your local AM station, then your receiver has a problem. I've built three of the Ten Tec 1253's and they all have excellent broadcast rejection.

> Is it critical to have the radio grounded?

"Critical"? No. Will it help? Yes. The more "critical" controls are the RF gain control, and the Regen control. If you hearing the "whistles", you should spend some time tweaking the regen and the RF gain controls. Basically, use only enough regen to bring in the station. Any change in RF gain, and to some extent, to volume control, will affect the reception capabilities of the radio. And I'm talking reeeeely small movements of the regen control.

The Ten Tec 1253 is a good, solid design, and really works well. Much better than my Star Roamer, Space Spanner, Heathkit, etc.

It's really worth reviewing the sections on using the controls, and spending some time operating your radio.

Hope this helps.

Norm/KQ6SD

3601. Don Lancaster

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: stoskopf@tri.NET
Message-ID: <3910E4B9.D27A4D78@tri.net>
Source record: 60906

Just got the latest Nuts and Volts: Loaded with interesting surplus parts and stuff, but no Don Lancaster. Heard that he was being dropped for reader lack of interest. Same with Poptronics.

I may be one of the few around that like that kind of eclectic column, but we have lost a great resource. He apparently intends to continue on the WEB, but the loss of monthly publication is going to hurt a bunch.

I take RadioCom for the Tech Topics section (sorry, and G3SEK), 73 for Above and Beyond (and Wayne's ravings), Circuit Cellar just to see what is going on in that sector, CQ for the propagation and contesting, QST because it is there, QEX for the tech stuff, probably will drop Poptronics and Nuts and Volts (although I think I am a life subscriber to the latter) now that both have lost my main interest.

You might drop by N&V in the arena at Dayton and mention that you miss Don.

N0UU

3602. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Claude Frantz <claude@netwoman.rz.unibw-muenchen.de>
Message-ID: <39111DEC.DCE0E036@netwoman.rz.unibw-muenchen.de>
Source record: 60907

Reg Edwards wrote:

> SOLNOID2.exe is an updated and improved version of successful program
> Solenoid.exe which it now replaces.

Is an UNIX version available ?

3603. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <391172f4.925596@news.erols.com>
Source record: 60908
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Peter: Thanks for the very inspirational postings! It reminds me a bit of the "homebrew tubes" articles that have appeared in QST over the years. I once cited the work of one intrepid Argentine ham who was making his own tubes -- my message was greated with much skepticisim. People just didn't believe it!

In case you don't know about the book, I suggest you take a look at "Crystal Fire" by Riordan and Hoddeson. Published in 1997, it does a very nice job of describing the development of the original point contact devices. It could have benefited from a few more diagrams, and the explanation of the theory behind these early transistors is kind of sketchy, but it is a very good book.

Good luck! 73 Bill N2CQR
http://www.erols.com/wmeara

On Wed, 03 May 2000 20:46:21 -0700, " H. Peter Friedrichs"
<NOSPAMpfriedr@azstarnet.com> wrote:

>Sorry for the belated response...I've been out of town.
>
>The semiconductor is a chip of germanium stolen from a 1N34. Phosphor bronze
>electrodes, sharpened to extreme pinpoints, touch the face of the crystal with
>a spacing on the order of 0.002" The germanium is N-type, the P junction is
>formed by virtue of the electrode draining off free electrons. Conductivity is
>enhanced by a "forming" process wherein a small capacitor, charged from 45-90
>volts, is dumped into the junction to cause extreme, localized heating.
>(something happens to the crystal structure, I'm led to believe.) To be
>honest, I don't fully understand the effects of the latter process yet, but
>the improvements are evident.
>
>As to my motives, I recently published a book called "The Voice Of The
>Crystal". If you get QST, check out the May issue, page 41, for a review that
>I'm quite proud of. VOTC is a book about "from scratch" construction of radio
>components including coils, rotary variable capacitors, detectors, and several
>high-impedance "headphones" utilizing shoe-polish tins, transformer
>laminations, and even piezo cigarette lighter parts. The end result was
>simple, functional (crystal) radio equipment built from homebrew parts. Of
>course, a logical sequel to this involves amplification, through the use of
>homemade tubes and transistors, no?
>
>
>
>Pete

>
>
>
>
>
>David Milne wrote:
>
>> Fascinating....I never thought I'd see someone build their own transistor.
>> Keep up the good work. Incidently, what did you use as semiconductor
>> material, and how did you fabricate it? Have you doped it at all?
>>
>> " H. Peter Friedrichs" wrote:
>>
>> > Hi to all:
>> >
>> > I have begun experimenting with some homemade (point contact)
>> > transistors. Transistor action, while perfectly evident through current
>> > measurements, has become troublesome and tedious to with multiple meters
>> > and power supplies.
>> >
>> > What I'm really looking for is a curve tracer, specifically the modular
>> > type that can be connected to a common o-scope to to display curve
>> > families.
>> >
>> > Anyone out there have one collecting dust in their ham shack or storage
>> > closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>> > my address to email.
>> >
>> > BTW, if you'd like to see a few pictures, check out these URLs:
>> >
>> > http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>> > http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>> > http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>> > http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>> > http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>> >
>> > The last URL is a photomicrograph of the electrodes in the transistor
>> > shown in the first URL. If you are patient enough, look at 'em all.
>> >
>> > Thanks in advance.
>> >
>> > Pete
>>
>> --
>> Regards
>>
>> David Milne
>> ICQ 37590068
>

3604. Transistor Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Barry McCarthy <barry@g0wbf.freeserve.co.uk>
Message-ID: <$23BsCAD4WE5EwZB@g0wbf.freeserve.co.uk>
Source record: 60909

http://www.intio.or.jp/jf10zl/trct.htm

Nobody has so far pointed you to this url. It might be just what you
need
--
Barry McCarthy
G0WBF

3605. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8err3e$i5g$1@ausnews.austin.ibm.com>
Source record: 60910
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

In <3910F28C.1112C70C@azstarnet.com>, " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com> writes:
>Sorry for the belated response...I've been out of town.
>
>The semiconductor is a chip of germanium stolen from a 1N34. Phosphor bronze
>electrodes, sharpened to extreme pinpoints, touch the face of the crystal with
>a spacing on the order of 0.002" The germanium is N-type, the P junction is
>formed by virtue of the electrode draining off free electrons. Conductivity is
>enhanced by a "forming" process wherein a small capacitor, charged from 45-90
>volts, is dumped into the junction to cause extreme, localized heating.
>(something happens to the crystal structure, I'm led to believe.) To be
>honest, I don't fully understand the effects of the latter process yet, but
>the improvements are evident.
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>As to my motives, I recently published a book called "The Voice Of The
>Crystal". If you get QST, check out the May issue, page 41, for a review that
>I'm quite proud of. VOTC is a book about "from scratch" construction of radio
>components including coils, rotary variable capacitors, detectors, and several
>high-impedance "headphones" utilizing shoe-polish tins, transformer
>laminations, and even piezo cigarette lighter parts. The end result was
>simple, functional (crystal) radio equipment built from homebrew parts. Of
>course, a logical sequel to this involves amplification, through the use of
>homemade tubes and transistors, no?
>
>
>
>Pete

Could it be that the electrical discharge of the capacitor is causing metal atoms to be diffused into the germanium/silicon? I'm aware of one technique where ion implantation is used for changing the type of the material. And, of course, there's the more normal diffusion. Does it make a difference in the direction of the discharge? It could also be that the thermal heating is disrupting the crystal structure, but, while this might enhance the conductivity, it would probably decrease the gain.

Dave

P.S. Standard Disclaimer: I work for them, but I don't spaek for them.

3606. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8ertrk$i5g$2@ausnews.austin.ibm.com>
Source record: 60911
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

In <3910F35F.16D431F7@azstarnet.com>, " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com> writes:
>I'd appreciate it *very much* if you'd forward a copy to me (just remove NOSPAM from
>my email address).
>
>From what I've read, both copper oxides and sulfides exhibit semiconductor properties,
>and were the basis for a "transistor" patent filed by a guy named Lilienfeld as far
>back as the mid 1920's. Did the recipe specify pennies?
>
>Pete
>
>Andrew Steven Dixon wrote:
>
>> I�ve seen a recipe for making a transistor out of ald coins and
>> electrolyte recently, but I�m not sure if it�s a joke. COULD work,
>> as you can make rectifiers from surprisingly primitive things!!
>>
>> I�ll try when I get hold of a copy.
>>
>> I also have some small article from I think the 60s on how to make a
>> transistor. If someone`s interested, tell me an appropriate place
>> where I can post the binary of the scan!
>>
>> On 2 May 2000 13:49:52 GMT, glass2@glass2.lexington.ibm.com wrote:
>>
>> >In <390D9899.9FAEBE0@camtech.net.au>, David Milne <dmilne@camtech.net.au> writes:
>> >>Fascinating....I never thought I'd see someone build their own transistor.
>> >>Keep up the good work. Incidently, what did you use as semiconductor
>> >>material, and how did you fabricate it? Have you doped it at all?
>> >>
>> >>" H. Peter Friedrichs" wrote:
>> >>
>> >>> Hi to all:
>> >>>
>> >>> I have begun experimenting with some homemade (point contact)
>> >>> transistors. Transistor action, while perfectly evident through current
>> >>> measurements, has become troublesome and tedious to with multiple meters
>> >>> and power supplies.
>> >>>
>> >>> What I'm really looking for is a curve tracer, specifically the modular
>> >>> type that can be connected to a common o-scope to to display curve
>> >>> families.
>> >>>

>> >>> Anyone out there have one collecting dust in their ham shack or storage
>> >>> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>> >>> my address to email.
>> >>>
>> >>> BTW, if you'd like to see a few pictures, check out these URLs:
>> >>>
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>> >>>
>> >>> The last URL is a photomicrograph of the electrodes in the transistor
>> >>> shown in the first URL. If you are patient enough, look at 'em all.
>> >>>
>> >>> Thanks in advance.
>> >>>
>> >>> Pete
>> >>
>> >>--
>> >>Regards
>> >>
>> >>David Milne
>> >>ICQ 37590068
>> >>
>> >>
>> >
>> >I know that it's possible to take a power transistor in a TO-3 package, and,
>> >with the careful use of a cutting tool (Dremel, hacksaw, etc.), to cut the
>> >top off of the package. This exposes the silicon wafer.
>> >
>> >Once the silicon wafer is exposed, it is somewhat light sensitive (e.g.,
>> >phototransistor).
>> >
>> >Would it be possible to use the collector area of the wafer as the substrate
>> >for a point contact transistor? Or, would the oxide coating be too thick
>> >to puncture? What type of wires would be the best to use?
>> >
>> >I remember that the original transistor was developed by accident while
>> >trying to make a low noise diode (I think the actual scenario was that
>> >a third electrode was added to a diode, and it was noticed that current
>> >flow between the electrodes were related, indicating an amplifying effect.).
>> >
>> >What semiconductor materials would be good to make transistors from? Obviously,
>> >silicon and germanium will work. What about GaAs (Very poisonous!)? What
>> >about some of the other materials that used to be used for point contact
>> >diodes, such as galena?
>> >
>> >What other types of solid state devices could be constructed? Could you

>> >fabricate your own FETs? What about UJTs (UniJunction Transistors)?
>> >SCRs and other four layer devices are probably out of the question.
>> >Could a MOSFET be fabricated?
>> >
>> >Dave
>> >
>> >P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>> >
>

I've found a reference to the work of Lilienfeld:

http://ece-www.colorado.edu/~bart/book/mosintro.htm

And, here are a few more (Unfortunately, they're in German, and my
German is a bit rusty):

http://www.alien.de/degufo/rech16.htm
http://www.elektroniknet.de/fachthemen/bauelemente/artikel/ek9726b_1.htm

The first reference indicates that Lilienfeld's patent was number
US 1,745,175. Unfortunately, this patent is too old to appear on the
IBM patent web-server:

http://www.patents.ibm.com

But, from the web-sites I've referenced above, it appears that
Lilienfeld's work concentrated on field effect transistors (FET) and not
bipolar junction transistors (BJT).

Does anyone have access to the actual patent document?

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3607. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8eruhf$i5g$3@ausnews.austin.ibm.com>
Source record: 60912
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

In <3910F35F.16D431F7@azstarnet.com>, " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com> writes:
>I'd appreciate it *very much* if you'd forward a copy to me (just remove NOSPAM from
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>
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>
>Pete
>
>Andrew Steven Dixon wrote:
>
>> I�ve seen a recipe for making a transistor out of ald coins and
>> electrolyte recently, but I�m not sure if it�s a joke. COULD work,
>> as you can make rectifiers from surprisingly primitive things!!
>>
>> I�ll try when I get hold of a copy.
>>
>> I also have some small article from I think the 60s on how to make a
>> transistor. If someone`s interested, tell me an appropriate place
>> where I can post the binary of the scan!
>>
>> On 2 May 2000 13:49:52 GMT, glass2@glass2.lexington.ibm.com wrote:
>>
>> >In <390D9899.9FAEBE0@camtech.net.au>, David Milne <dmilne@camtech.net.au> writes:
>> >>Fascinating....I never thought I'd see someone build their own transistor.
>> >>Keep up the good work. Incidently, what did you use as semiconductor
>> >>material, and how did you fabricate it? Have you doped it at all?
>> >>
>> >>" H. Peter Friedrichs" wrote:
>> >>
>> >>> Hi to all:
>> >>>
>> >>> I have begun experimenting with some homemade (point contact)
>> >>> transistors. Transistor action, while perfectly evident through current
>> >>> measurements, has become troublesome and tedious to with multiple meters
>> >>> and power supplies.
>> >>>
>> >>> What I'm really looking for is a curve tracer, specifically the modular
>> >>> type that can be connected to a common o-scope to to display curve
>> >>> families.
>> >>>

>> >>> Anyone out there have one collecting dust in their ham shack or storage
>> >>> closet? Willing to part with it for a reasonable sum? Remove NOSPAM from
>> >>> my address to email.
>> >>>
>> >>> BTW, if you'd like to see a few pictures, check out these URLs:
>> >>>
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
>> >>> http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif
>> >>>
>> >>> The last URL is a photomicrograph of the electrodes in the transistor
>> >>> shown in the first URL. If you are patient enough, look at 'em all.
>> >>>
>> >>> Thanks in advance.
>> >>>
>> >>> Pete
>> >>
>> >>--
>> >>Regards
>> >>
>> >>David Milne
>> >>ICQ 37590068
>> >>
>> >>
>> >
>> >I know that it's possible to take a power transistor in a TO-3 package, and,
>> >with the careful use of a cutting tool (Dremel, hacksaw, etc.), to cut the
>> >top off of the package. This exposes the silicon wafer.
>> >
>> >Once the silicon wafer is exposed, it is somewhat light sensitive (e.g.,
>> >phototransistor).
>> >
>> >Would it be possible to use the collector area of the wafer as the substrate
>> >for a point contact transistor? Or, would the oxide coating be too thick
>> >to puncture? What type of wires would be the best to use?
>> >
>> >I remember that the original transistor was developed by accident while
>> >trying to make a low noise diode (I think the actual scenario was that
>> >a third electrode was added to a diode, and it was noticed that current
>> >flow between the electrodes were related, indicating an amplifying effect.).
>> >
>> >What semiconductor materials would be good to make transistors from? Obviously,
>> >silicon and germanium will work. What about GaAs (Very poisonous!)? What
>> >about some of the other materials that used to be used for point contact
>> >diodes, such as galena?
>> >
>> >What other types of solid state devices could be constructed? Could you

>> >fabricate your own FETs? What about UJTs (UniJunction Transistors)?
>> >SCRs and other four layer devices are probably out of the question.
>> >Could a MOSFET be fabricated?
>> >
>> >Dave
>> >
>> >P.S. Standard Disclaimer: I work for them, but I don't speak for them.
>> >

I think most of us have heard about Copper-Oxide rectifiers. Plus, who could ever forget about Selenium rectifiers, but I'm not sure how much of a semiconductor Selenium is (plus, I think it's rather posionous, at least, in some forms).

There were also electrolytic rectifiers used back in the distant past, but I'm not sure if these could be made into a transistor. Of course, there is some interesting work going on now involving liquid transistors, with the active material being a hydrocarbon (I'm serious!). The liquid transistors could be painted onto a substrate. I think one area of interest is for driving liquid crystal displays.

I'd be interested in seeing both the articles mentioned above.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3608. PC Board Developer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Art Alto <reply-to-group-aalto@linkline.com>
Message-ID: <sh30dl10c3461@corp.supernews.com>
Source record: 60913

Will PC Board Developer 418-500ml from MG Chemicals (sodium hydroxide) work with Pre-Sensitized PC Board 21-152 from GC Thorsen?

Does anyone know a URL for GC Thorsen?

Thanks

Art Alto N6VIG

3609. Q Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: mvgjr1@mvgsa.mv.lucent.com
Message-ID: <8es1gk$2hn@nntpa.cb.lucent.com>
Source record: 60914

RE: WTB Curve Tracer

Try asking the folks at:
www.recycledradio.com

3610. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3911671A.89A3263C@webaxs.net>
Source record: 60915
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Thermal effects will make measurements a bit distorted, unless you do
pulsed measurements.

" H. Peter Friedrichs" wrote:
>
> Very true. Alas, one must choose his battles.
>
> Building my own curve tracer, either from pieces and parts, through the use of a computer and various
> I/O cards, or even a little PIC-based device sounds fun and exciting. It's doable, and well within my
> skillset on all accounts. The trouble is that my free time is *very* limited, and I can either spend
> it on a tangent building a neat tool, or try to the obtain that tool through more direct means, and
> maintain my focus on the actual project at hand.
>
> I agree that ideally, the computer solution *would* be the best. You can collect data, slam the
> numbers into a spreadsheet, and chart 'em at will.
>
> As to specifications on my transistors, I have no formal specs, yet. I have probably set up a dozen or
> more crystal/electrode sets in the three housings depicted, and destroyed them all exploring the
> limits of junction voltages. Gain is impacted by factors like electrode spacing, electrode pressure,
> electrode geometry, and factors relating to the crystal die itself.
>
> Speaking of destroying transistors, preparing the electrodes is a painstaking process, only recently
> made easier through the procurement of a microscope. (The electrodes you saw in the photomicrograph
> were prepared using a simple jeweler's loupe. I may now be permanently cross-eyed!)
>
--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3611. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Michael Jones <mikej@scsitools.com>
Message-ID: <sh3a6talc34182@corp.supernews.com>
Source record: 60916

I can't find that issue - could you post the web paths that you mentioned?

Donald R Montgomery <donrm@sr.hp.com> wrote in message
news:8eqaj9$8ir$1@nirvana.sr.hp.com...
> Robert Fanfant <fanfant@ix.netcom.com> wrote:
> > QST did a technical review of this radio a couple of months ago...Bottom
> > line was that the K2 had performance numbers of rigs in the $2000 -
$3500
> > range. Worth checking out.
>
> The QST article also had some web paths to discussions of the K2 -
> you might want to check it out.
>
> Don K6LTS
> donrm@sr.hp.com

3612. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3911AAA5.64F7D240@azstarnet.com>
Source record: 60917
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

According to the scant information I've found, the answer is yes on both accounts. Both the thermal
disruption of the crystal, and to a lesser extent, ion migration (of the phosphorus) serves to improve
the junction.

Strangely, the one document I have that that talks about "forming" describes dumping the cap into the
junction in the reverse direction.

glass2@glass2.lexington.ibm.com wrote:

> Could it be that the electrical discharge of the capacitor is causing
> metal atoms to be diffused into the germanium/silicon? I'm aware of one
> technique where ion implantation is used for changing the type of the
> material. And, of course, there's the more normal diffusion. Does it
> make a difference in the direction of the discharge? It could also be
> that the thermal heating is disrupting the crystal structure, but, while
> this might enhance the conductivity, it would probably decrease the gain.
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't spaek for them.

3613. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3911AB4E.9E864E7B@azstarnet.com>
Source record: 60918
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Another point well taken. I've observed considerable drift (due to thermal effects) while making my
measurments. To minimize this effect I now do them with pushbuttons, as a muffin fan blows over the
junction.

"Russ.Shaw" wrote:

> Thermal effects will make measurements a bit distorted, unless you do
> pulsed measurements.
>
> " H. Peter Friedrichs" wrote:
> >
> > Very true. Alas, one must choose his battles.
> >
> > Building my own curve tracer, either from pieces and parts, through the use of a computer and various
> > I/O cards, or even a little PIC-based device sounds fun and exciting. It's doable, and well within my
> > skillset on all accounts. The trouble is that my free time is *very* limited, and I can either spend
> > it on a tangent building a neat tool, or try to the obtain that tool through more direct means, and
> > maintain my focus on the actual project at hand.
> >
> > I agree that ideally, the computer solution *would* be the best. You can collect data, slam the
> > numbers into a spreadsheet, and chart 'em at will.
> >
> > As to specifications on my transistors, I have no formal specs, yet. I have probably set up a dozen or
> > more crystal/electrode sets in the three housings depicted, and destroyed them all exploring the
> > limits of junction voltages. Gain is impacted by factors like electrode spacing, electrode pressure,
> > electrode geometry, and factors relating to the crystal die itself.
> >
> > Speaking of destroying transistors, preparing the electrodes is a painstaking process, only recently
> > made easier through the procurement of a microscope. (The electrodes you saw in the photomicrograph
> > were prepared using a simple jeweler's loupe. I may now be permanently cross-eyed!)
> >
> --

> **
> * Russell Shaw, B.Eng, M.Eng(Research) *
> * Electronics Consultant *
> * email: russell@webaxs.net *
> * Australia *
> **

3614. Re: Transistor Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <3911ABD4.D88F2785@azstarnet.com>
Source record: 60919

Have you explored this guy's site? Remarkable!

Pete

Barry McCarthy wrote:

> http://www.intio.or.jp/jf10zl/trct.htm
>
> Nobody has so far pointed you to this url. It might be just what you
> need
> --
> Barry McCarthy
> G0WBF

3615. Re: looking for SSB40M transceivers shematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <maiQ4.10185$sB3.6888@news.indigo.ie>
Source record: 60920

>HELLO,
>I am a french OM (F4 AER)
>as a am working on "the best design" for a cheap but
>efficient SSB transceiver,As it is better to improve than to discover
>things existings, I am looking for every schematics
>concerning: SSB; IF amplifiers; ladder quartz filter for SSB,
>using common components like NE612, MC1350P, PIC 16F84.
>PA from 5 to 50 W using cheap transistors; SSB KITS descriptions,
>synthetiseur PLL or DDS with PIC for exemple.
>
>I am sending IRC's to cover the cost of your copy and postage
>if you cant send me file or links
>
>Many thanks,
>
>Laurent

Have a look at my new four band SSB transceiver. The design is
very simple. I use a 7.8MHz crystal filter, from a scrap CB.
All transmitter stages are run in class A, for improved linearity.

http://www.qsl.net/ei9gq/index.html

3616. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <3911C599.C790919B@rsccd.org>
Source record: 60921
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Bill Meara wrote:

[snip]

> >As to my motives, I recently published a book called "The Voice Of The
> >Crystal". If you get QST, check out the May issue, page 41, for a review that
> >I'm quite proud of. VOTC is a book about "from scratch" construction of radio
> >components including coils, rotary variable capacitors, detectors, and several
> >high-impedance "headphones" utilizing shoe-polish tins, transformer
> >laminations, and even piezo cigarette lighter parts. The end result was
> >simple, functional (crystal) radio equipment built from homebrew parts. Of
> >course, a logical sequel to this involves amplification, through the use of
> >homemade tubes and transistors, no?

> >Pete

I had always assumed that the Germanium transistors, since they can't be
passivated, would never last for more than a matter of hours or days,
because of contamination from the air. Maybe the point contact isn't
that critical.

> >> > http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> >> > http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> >> > http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> >> > http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> >> > http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif

3617. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <LilQ4.37295$PV.2619292@bgtnsc06-news.ops.worldnet.att.net>
Source record: 60922

Sounds good; I've started the wheels of justice in motion, so stay tuned!
Pete

Eamon Skelton <Xnospam@oceanfree.net> wrote in message
news:gvIP4.9706$sB3.6657@news.indigo.ie...
> >Hi everybody, <snip>
> >Are binary postings ok on this newsgroup, and if not,
> >where can I post them for interested parties?
>
> >Pete Gianakopoulos
> >Chicago, Il
>
> It is not a good idea to post binaries to a discussion newsgroup.
> I suggest you put the information on a web page. I agree with John Miles'
> recommendation of qsl.net. Their web and ftp servers are fast and
reasonably
> reliable. My own web page is on qsl.net. I'm looking forward to seeing
your
> design.
>
> 73, Ed. EI9GQ.
>
>
> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://www.qsl.net/ei9gq
>
>

3618. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <V3mQ4.10289$sB3.6859@news.indigo.ie>
Source record: 60923

```
>Reg Edwards wrote:
>
>> SOLNOID2.exe is an updated and improved version of successful program
>> Solenoid.exe which it now replaces.
>
>Is an UNIX version available ?

It would be nice to have a Linux version and a Mac version. Perhaps we
could persuade Reg to put the source code on his web site?

The following C program is based on the well known formula:
(n^2 * r^2) / (9*r + 10*l)

To compile under Linux:
gcc -lm whatever-you-call-it.c

#include <stdio.h>
#include <math.h>

int main(void)

{
float N,l,r,result;

printf("\n\nCoil length in inches ? ");
scanf("%f",&l);

printf("\n\nCoil radius in inches ? ");
scanf("%f",&r);

printf("\n\nNumber of turns ? ");
scanf("%f",&N);

result = ((N*N)*(r*r))/((9 * r) + (10 * l));

printf("\n\n%f MicroHenries\n\n\n",result);

}

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq
```

3619. Anybody have an AD9832?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Dave Strout <dstrout@shell.clark.net>
Message-ID: <47mQ4.20892$0o4.196111@iad-read.news.verio.net>
Source record: 60924

Help! I need to get my hands on a few (5-10) AD9832 (DDS by Analog Devices)
for a project I'm working on. If anybody has so much as _one_ they would be
willing to let go off, please drop me some mail and we'll work something out!

Thanks,
dave.
--
Dave Strout dstrout@clark.net
"Go away, or I will replace you with a very small shell script!"

3620. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: adouglas@gis.net
Message-ID: <3911d498.4233124@news.newsguy.com>
Source record: 60925
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Hi,
Pete Friedrichs wondered:

>From what I've read, both copper oxides and sulfides exhibit semiconductor properties,
>and were the basis for a "transistor" patent filed by a guy named Lilienfeld as far
>back as the mid 1920's. Did the recipe specify pennies?

Lilienfeld's work gets rediscovered every few years. A good
reference is Physics Today, February 1964, pp.24-26 and May 1964,
pp.60-62. There is no evidence that his devices worked.

Someone mentioned pulse operation of the curve tracer to avoid
thermal effects. The commercial Tektronix tracers will do this, but
I'm sure are too large an investment for a one-time project.

73, Alan

3621. FA RF relays on Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Mike Burch <libertybell7@home.com>
Message-ID: <39120433.2B28209F@home.com>
Source record: 60926

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=324958151

3622. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: " H. Peter Friedrichs" <NOSPAMpfriedr@azstarnet.com>
Message-ID: <39120C7C.E0A9A500@azstarnet.com>
Source record: 60927
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Maybe that's why the commercial units were filled with wax...as an air barrier? I thought it was supposed to stabilize the catwhiskers...

Lizard Blizzard wrote:

> Bill Meara wrote:
>
> [snip]
>
> > >As to my motives, I recently published a book called "The Voice Of The
> > >Crystal". If you get QST, check out the May issue, page 41, for a review that
> > >I'm quite proud of. VOTC is a book about "from scratch" construction of radio
> > >components including coils, rotary variable capacitors, detectors, and several
> > >high-impedance "headphones" utilizing shoe-polish tins, transformer
> > >laminations, and even piezo cigarette lighter parts. The end result was
> > >simple, functional (crystal) radio equipment built from homebrew parts. Of
> > >course, a logical sequel to this involves amplification, through the use of
> > >homemade tubes and transistors, no?
>
> > >Pete
>
> I had always assumed that the Germanium transistors, since they can't be
> passivated, would never last for more than a matter of hours or days,
> because of contamination from the air. Maybe the point contact isn't
> that critical.
>
> > >> > http://www.azstarnet.com/~pfriedr/transistor/xsist1-w.gif
> > >> > http://www.azstarnet.com/~pfriedr/transistor/xsist2-w.gif
> > >> > http://www.azstarnet.com/~pfriedr/transistor/xsist3-w.gif
> > >> > http://www.azstarnet.com/~pfriedr/transistor/xsist4-w.gif
> > >> > http://www.azstarnet.com/~pfriedr/transistor/whisk-w.gif

3623. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <OYZ7udit$GA.303@cpmsnbbsa04>
Source record: 60928

Eamon Skelton wrote in message ...
>It would be nice to have a Linux version and a Mac version. Perhaps we
>could persuade Reg to put the source code on his web site?
>
Chortle, guffaw, ROTFLMAO!!! See Reg's posts about how he mistakenly equates source code with algorithms. Lots of them in the past 6 months. :~)

Mike Lucas W5CHR
Memphis, Tenn

3624. Re: Transverters (144MHz-28MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <8es0kpifn1@bbs.aeminium.pt>
Source record: 60929

Matt Donohoe <therelic@dingoblue.net.au> wrote:
> Hello,
> I am wondering if anybody would have schematics for a relatively
> 'easy-to-build.' 144MHz to 28MHz transverter.

Hello,
you can find a schematic on the February 2000 issue of Elektor
Electronics for the RX part. I haven't test it, but its simple enough to
build.
Cheers,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

3625. New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8eqbt1$2ot$1@plutonium.btinternet.com>
Source record: 60930

Program MAGLOOP4.exe is an improved and updated version of RJELOOP1.
It analyses performance and assists with design of magnetic loop
antennas of various regular shapes from triangular to circular.

The program now has facilities to sweep input parameters of loop
perimeter, conductor diameter, height above ground, soil resistivity
and operating frequency over a wide range of values while observing
computed performance data. Performance includes percentages of
transmitter output power dissipated in the ground under the antenna
and that lost in the conductor RF skin resistance.

The behaviour of a loop at low heights, including the de-tuning effect
of close proximity to other materials, are modelled with greater
accuracy than hitherto. Obseve how the computed tuning capacitance and
loss changes as height above low-resistance ground or sea water
decreases to 10 mm (0.4 inches).

An improvement in the accuracy of predicting radiating efficiency as
the loop perimeter nears 1/2-wavelength may be of interest but is not
of great importance. Efficiency is very high anyway and the
space-saving virtues of magloops are diminished with the large
relative loop diameters.

The not-very-useful values of loop inductance, radiation resistance
and conductor resistance are no longer displayed. The all-important
values of tuning capacitance and peak volts across the capacitor have,
of course, been retained.

A inovation of the program is the very practical illustration of
magloop performance by predicting S-meter readings of receivers at
radio path distances of 800 km (500 miles, 1 hop in darkness) and 8000
km (5000 miles, 3 hops in sunlight), via the F-layer at frequencies
not too different from MUF, for any given transmitter power output.

Transmitter power into a magloop is eventually limited by the peak
working voltage of an expensive, relatively large value, variable
tuning capacitor. If the program predicted the minimum spacing
between the plates of such a capacitor it would probably lead to
argument. Has anyone any ideas on that subject ? Spacing versus
volts and frequency ? A formula ?

Download program MAGLOOP4 from my website in a few seconds. Not zipped
up. Run immediately and entertain yourself.

Regards to all, Reg, G4FGQ
==========
Free, high quality, radio design software -

http://www.btinternet.com/~g4fgq.regp
==========

3626. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-04 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ergns$9ee$1@neptunium.btinternet.com>
Source record: 60931

Claude Frantz wrote ...
> > SOLNOID2.exe is an updated and improved version of successful
program
> > Solenoid.exe which it now replaces.
>
> Is an UNIX version available ?
========================
Claude, sorry, no Unix version. I have no facilities and don't know
how to write Unix software.

Is there any software which makes a Unix machine think its a PC ?
Emulator ?

Yours, Reg, G4FGQ

3627. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <3912C918.88E48495@bellsouth.net>
Source record: 60845

" H. Peter Friedrichs" wrote:
>
> Sorry for the belated response...I've been out of town.
>
> The semiconductor is a chip of germanium stolen from a 1N34. Phosphor bronze
> electrodes, sharpened to extreme pinpoints, touch the face of the crystal with
> a spacing on the order of 0.002" The germanium is N-type, the P junction is
> formed by virtue of the electrode draining off free electrons. Conductivity is
> enhanced by a "forming" process wherein a small capacitor, charged from 45-90
> volts, is dumped into the junction to cause extreme, localized heating.
> (something happens to the crystal structure, I'm led to believe.) To be
> honest, I don't fully understand the effects of the latter process yet, but
> the improvements are evident.
>
> As to my motives, I recently published a book called "The Voice Of The
> Crystal". If you get QST, check out the May issue, page 41, for a review that
> I'm quite proud of. VOTC is a book about "from scratch" construction of radio
> components including coils, rotary variable capacitors, detectors, and several
> high-impedance "headphones" utilizing shoe-polish tins, transformer
> laminations, and even piezo cigarette lighter parts. The end result was
> simple, functional (crystal) radio equipment built from homebrew parts. Of
> course, a logical sequel to this involves amplification, through the use of
> homemade tubes and transistors, no?
>
> Pete

I love you. Good luck!

3628. Knight Rider Scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: weyoun7@aol.com
Message-ID: <20000505125203.05659.00001593@ng-cp1.aol.com>
Source record: 60846

Can someone suggest to me a circuit that can produce the effect as seen on the Knight Rider Scanner? I'm wanting to do with this with LEDs for right now.

For those that don't know the effect is a row of light (say 8 to 10) and the lights light up and go back and forth, but it's not a LED follower. This looks more like a game of ping pong, so the LEDs light and travle to one end then return. The LEDs also sort of trail one another in a slow fade, I figure I can reproduce that effect with some caps.

Thanks for any suggestions or hints,
-Justin R.

3629. My J310s

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: "Ralph E. Carter" <carterr@bellsouth.net>
Message-ID: <391339E0.A458478C@bellsouth.net>
Source record: 60847

I received my quantity purchase of the
magnificent J310 FET just now.
Now, I build!

3630. Re: Formal complaint filed with BLUEMONGOOSE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Moon Unit 376234+1/2 <nopants@aol.com>
Message-ID: <j_HQ4.30342$x4.952929@newsread1.prod.itd.earthlink.net>
Source record: 60848
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

Why not just ignore them instead?

When someone responds to them it probably
gurantees that they will return with more postings.

WB3KUM/9 <d.breeden@NOSPAMwcom.com> wrote in message
news:3912AD18.56D25993@NOSPAMwcom.com...
> Find who host these jerks and have them pulled.
>
>
> hostmaster@BLUEMONGOOSE.COM
>
>

3631. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8eug8s$60q$1@neptunium.btinternet.com>
Source record: 60849

Hi Mike, nice to see you take so much continued interest in my posts.
What's in them which you find so atractive ?
--
Regards, Reg, G4FGQ
==========
http://www.btinternet.com/~g4fgq.regp
==========
Mike Lucas W5CHR <lucascom@email.msn.com> wrote in message
news:OYZ7udit$GA.303@cpmsnbbsa04...
>
> Eamon Skelton wrote in message ...
> >It would be nice to have a Linux version and a Mac version.
Perhaps we
> >could persuade Reg to put the source code on his web site?
> >
> Chortle, guffaw, ROTFLMAO!!! See Reg's posts about how he mistakenly
equates
> source code with algorithms. Lots of them in the past 6 months. :~)
>
> Mike Lucas W5CHR
> Memphis, Tenn
>
>

3632. Who had url for clock oscillator tx?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: "John Kirk, VE6XT" <jakirk@calcna.ab.ca>
Message-ID: <Pine.A41.4.05.10005051742430.21444-100000@srv1.calcna.ab.ca>
Source record: 60850

Could whomever mentioned it please send me the url?
This was a ttl clock followed by a generic rf power amp.
Thanks!
John

3633. Re: Spark and Marconi Info wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: "c.wright" <c.wright@auckland.ac.nz>
Message-ID: <39121080.E49C3953@auckland.ac.nz>
Source record: 60932

Bill Meara wrote:

> Anyone interested in Marconi's rigs needs to get a copy of Peter R.
> Jensen's truly excellent book "In Marconi's footsteps: Early Radio."
> Jensen is a ham (Vk4AQJ and G4GZT). In his book he visits all of
> Marconi's transmitter sites and describes in detail the construction
> of replica equipment. Published by Kangaroo press in 1994.
>
> 73 Bill N2CQR
> http://www.erols.com/wmeara
>
> On Fri, 28 Apr 2000 19:07:36 -0400, "Cestyll O. Dywod, esq."
> <willi6@erols.com> wrote:
>
> >Contact the following for a catalog of books on all "old" electronics topics.
> >Their typical catalog will have numerous early books on spark technology (do
> >those two words go together). Some are the do-it-yourself type for
> >youngsters, hams, and Scouts. Others are the engineering or theoretical type
> >for ship and shore stations. And some are historical or other themes. Good
> >company, great books!
> >
> >New Wireless Pioneers
> >Box 398
> >Elma, NY
> >14059
> >
> >PH: (716) 681-3186
> >
> >Or, try:
> >
> > http://www.marconi-wireless.com
> >
> >not sure if web page is up yet.
> >
> >73, Dave K7HMP
> >
> >
> >
> >Fritz Sonnichsen wrote:
> >
> >> I am working with an engineering department here, and we are trying to
> >> develop, for the lab, a Marconi or spark sending unit for demonstration
> >> purposes. We have sucessfully built a coherer and transmitted high voltage
> >> sparks generated signals across a few feet. We would be interested in

> >> hearing from anyone who has either theoretical information or practical
> >> experience in building, early Marconi or spark sending units.
> >>
> >> Cheers
> >> Fritz (AA2OP)
> >

Maybe I can help a little here. I have built a repro 1911 type RX using silicon, electrolytic and a home brew Marconi type magnetic detector. The only problem with the "maggie",
by the way is the difficulty of getting really fine soft iron wire for the loop. It does work quite well as a detector however. However Peter Jensen's suggestion of using recording tape instead of soft iron didn't work in my setup.
As to spark Tx gear, I have built low power spark TX's using original fixed gaps, rotary gaps (using 400 Hz AC) and have attempted a "Quenched gap" a la Telefunken.

This last is however very hard to scale and the shaping and machining of the spark gap discs is both difficult and subtle.
An old friend of mine built a very sucessful early Marconi rig using a coherer which worked over hundreds of feet. However he unfortunately died last year.

So basically my experience is basically with later pre WW1 Marconi gear. On that basis I would say that for a small TX thr rotary gap is the easiest to get going. By all means contact me if I can help.

Regards Cliff ZL1BDA ex G3NIA NZVRS

3634. Re: 0 to 30MHz high-performance receiver design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Art <normanmo@muohio.edu>
Message-ID: <01bfb636$64620d60$9d1d3586@living-room>
Source record: 60933

How about the seldom used alt.binaries.schematics.electronic news group?
Much easier than writing a web page. Maybe not many providers carry it?

NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net> wrote in article
<LilQ4.37295$PV.2619292@bgtnsc06-news.ops.worldnet.att.net>...
> Sounds good; I've started the wheels of justice in motion, so stay tuned!
> Pete
>
> Eamon Skelton <Xnospam@oceanfree.net> wrote in message
> news:gvIP4.9706$sB3.6657@news.indigo.ie...
> > >Hi everybody, <snip>
> > >Are binary postings ok on this newsgroup, and if not,
> > >where can I post them for interested parties?
> >
> > >Pete Gianakopoulos
> > >Chicago, Il
> >
> > It is not a good idea to post binaries to a discussion newsgroup.
> > I suggest you put the information on a web page. I agree with John
Miles'
> > recommendation of qsl.net. Their web and ftp servers are fast and
> reasonably
> > reliable. My own web page is on qsl.net. I'm looking forward to seeing
> your
> > design.
> >
> > 73, Ed. EI9GQ.
> >
> >
> > --
> > Remove 'X' to reply.
> >
> > EI9GQ homebrew radio page
> > http://www.qsl.net/ei9gq
> >
> >
>
>
>

3635. Modifying Primestar LNB's for transmitters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: dr.dongle@juno.com
Message-ID: <8etemh$k4o$1@nnrp1.deja.com>
Source record: 60934

I saw an artical from the UK a while back on modifying TVRO LNB's to convert them to transmitters. I have several defunkt Primestar dishes and recently opened up one of the LNB's which was very similar to the unit in the artical. Has any one explored this?
It appears that the two "pill" tranisistors in each section (one Horizontal and one vertical) could be moved 180 degrees and the various filter ckts modifyed as in the artical.
dr.d
--
Stop the madness vote Libertarian!
All it takes for EVIl to triumph is for good people to do nothing!
-Edmond Burke-
Chris Snyder, Cosby, Tn. KD4 OGD

Sent via Deja.com http://www.deja.com/
Before you buy.

3636. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Steve <"stephen.wilson<remove>"@cmr.uq.edu.au>
Message-ID: <39123F20.F9CF2F8E@cmr.uq.edu.au>
Source record: 60935
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

Do you have any sailboard shops in your area? They often have fractured fibreglass masts or new sticks if you wish.

Cheers,

Steve W

Christopher An wrote:

> Hi,
>
> Thank you for reading this posting. I am currently looking for sources
> for fiberglass mast. The length does not have to be long. The size I
> am looking for is about 5 feet long (or longer). Strength might be a
> concern because I am using it in high wind area. If you know any place
> that I can find those, I'd like to share it with you and will appreciate
> your help. I am also looking for 500~1000pF 2000V variable capacitor.
>
> Thanks for reading and 73,
>
> Christopher VE3UVT

3637. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: MC 10kW Jesus <qsl27@hotmail.com>
Message-ID: <39124096.76905B53@hotmail.com>
Source record: 60936
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

Another option may be a shop that sells sail bording supplies.

Christopher An wrote:
>
> Hi,
>
> Thank you for reading this posting. I am currently looking for sources
> for fiberglass mast. The length does not have to be long. The size I
> am looking for is about 5 feet long (or longer). Strength might be a
> concern because I am using it in high wind area. If you know any place
> that I can find those, I'd like to share it with you and will appreciate
> your help. I am also looking for 500~1000pF 2000V variable capacitor.
>
> Thanks for reading and 73,
>
> Christopher VE3UVT

3638. Stepper relay needed Rotomite?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <39124C5A.F634F04E@nettally.com>
Source record: 60937

I am looking for a modern stepper relay.

Specifically what I am looking to do is switch 4 to 8 legs of a Beverage array remotely with a simple pair of wires. I only wish to pulse the relay, not have to apply a continuous voltage.

I have heard of a relay called "Rotomite" but cannot find any info on one. Looking for a source of same or similar.

Thanks

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come
at you rapidly.

3639. Re: Stepper relay needed Rotomite?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: hrbcrb@aol.com.goaway
Message-ID: <20000505011525.17108.00001472@ng-cb1.aol.com>
Source record: 60938

You might try a search under Ledex or Lucas/Ledex. Ledex makes several variations of stepper switches.

Good luck, Hugh KF6HHS
Retired, now life moves at my pace.
please note spam filter

3640. Dual Voltage Power Supply Metering?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: k7on@earthlink.net
Message-ID: <MPG.137c80bf8279cc3f989686@news.earthlink.net>
Source record: 60939

I recently finished a small power supply for experimenting
with various circuits (a "bench" supply).

It has dual voltages, individually controllable (1.2 to 21.5 and
-1.2 to -21.5) - as well as +/-12, +/-5, and +/-23 unregulated.
Not a high current supply, just handy - I hope.

Anyway, I left sufficient (I hope) space on the front panel
for metering of the two variable voltages.

I am now looking for suggestions for (inexpensively) adding
metering to this supply, for example 3-digit digital readout
XX.X or -XX.X etc of voltage (or possibly current also).

Anyone know of (cheap, simple) 3 digit voltage meters that
might be added to this project?

Thanks, Brian

--
mailto: k7on@earthlink.net
--

3641. PC board/schematic program for Macintosh 68040

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Dean Arthur <dearthur@silverstar.com>
Message-ID: <391276EA.1344@silverstar.com>
Source record: 60940

Looking for Mac-based schematic & pc-board design program.

3642. Re: Transistor Curve Tracer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <3912d57c.91671912@news.erols.com>
Source record: 60941

Yes, AMAZING SITE!

Peter: For the curve tracer here's an idea: I recently picked up a
little VOM from Radio Shack that has a computer interface and the
necessary software. You might have your curve tracer right there.

Bill N2CQR
http://www.erols.com/wmeara

On Thu, 04 May 2000 09:56:53 -0700, " H. Peter Friedrichs"
<NOSPAMpfriedr@azstarnet.com> wrote:

>Have you explored this guy's site? Remarkable!
>
>Pete
>
>Barry McCarthy wrote:
>
>> http://www.intio.or.jp/jf10zl/trct.htm
>>
>> Nobody has so far pointed you to this url. It might be just what you
>> need
>> --
>> Barry McCarthy
>> G0WBF
>

3643. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <39129768.803679@news.eunet.yu>
Source record: 60942
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

3644. Formal complaint filed with BLUEMONGOOSE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <3912AD18.56D25993@NOSPAMwcom.com>
Source record: 60943
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

Find who host these jerks and have them pulled.

hostmaster@BLUEMONGOOSE.COM

3645. looking for SSB KITS descriptions,schematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-05 00:00:00 UTC
From: Laurent CHABERT <Laurent.chabert@imag.fr>
Message-ID: <3912B7AE.3384@imag.fr>
Source record: 60944

HELLO,
I am a french OM (F4 AER)
I am looking for shematics for kits of transceiver SSB
to help me in my design, because it is better to improve
than to discover things existings
I am looking for every schematics
concerning: SSB transceivers;SSB KITS descriptions
IF amplifiers; ladder quartz filter for SSB,
using common components like NE612, MC1350P, PIC 16F84.
PA from 5 to 50 W using cheap transistors;
synthetiseur PLL or DDS with PIC for exemple.

I am sending IRC's to cover the cost of your copy and postage
if you cant send me file or links

Many thanks.
<laurent.chabert@imag.fr>

F4 AER,
Laurent CHABERT
3 rue docteur VALOIS
38400 ST MARTIN D'HERES
FRANCE

3646. Radio Equipment Regulations Web Site

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: techie@radioregs.com
Message-ID: <8f0j1n$22e$1@nnrp1.deja.com>
Source record: 60851

I am currently developing a web site about the application of the
European R&TTE Directive, 1999/5/EC, at http://www.radioregs.com.

I would welcome any comments about this site, its usefulness and any
proposals for its improvement.

Regards

techie@radioregs.com

Sent via Deja.com http://www.deja.com/
Before you buy.

3647. Re: Knight Rider Scanner

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: "Laszlo I. Morocz" <kf4pv@SPAMMENOTlmorocz.com>
Message-ID: <roVQ4.7234$oX.4852@jump.innerx.net>
Source record: 60852

Hey Justin,

Try your favorite 8-bit processor chip (Atmel or PIC, for example) directly driving the LEDs. If you get ambitious enough, you could even do the fade in software by driving the LEDs with a software-controlled variable duty cycle square wave. Whole circuit would be 1 chip, 1 resistor and the LEDs (plus a bunch of software, of course).

If you're not into a software implementation, then try a couple of 74LS194A 4-bit bidirectional shift registers. You'll have to add a few glue logic chips to do the initial load at power-up and to detect when the direction needs to change, as well as a clock. I'm guessing that'd take a couple of flip flops and a 555. The parts count would definitely be higher, as would the size of the board and the assembly time, but it'd be a purely hardware project.

And if you really want to be low tech, try an electric motor pushing a wiper contact a la windshield wipers :-)

73 de KF4PV/3, Laszlo

--
To reply, remove the text SPAMMENOT from the e-mail address.
Weyoun7 wrote in message <20000505125203.05659.00001593@ng-cp1.aol.com>...
>Can someone suggest to me a circuit that can produce the effect as seen on
the
>Knight Rider Scanner? I'm wanting to do with this with LEDs for right now.
>
>For those that don't know the effect is a row of light (say 8 to 10) and
the
>lights light up and go back and forth, but it's not a LED follower. This
looks
>more like a game of ping pong, so the LEDs light and travle to one end then
>return. The LEDs also sort of trail one another in a slow fade, I figure I
can
>reproduce that effect with some caps.
>
>Thanks for any suggestions or hints,
>-Justin R.

3648. Re: Transverters (144MHz-28MHz)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: k4yz@aol.com
Message-ID: <20000506100932.19165.00001353@ng-ci1.aol.com>
Source record: 60853

>Subject: Re: Transverters (144MHz-28MHz)
>From: slug@aeminium.dhis.dee.uc.pt
>Date: 05/04/2000 9:14 AM Central Daylight Time

><therelic@dingoblue.net.au> wrote:
>> Hello, I am wondering if anybody would have schematics for a relatively 'easy-to-build.' 144MHz to 28MHz transverter.<<

I've not ben following this thread, so pardon me if I repeat something that's already been suggested, but have you considered the TenTec transverters?

I have the six meter to 20 meter transverter and I am very pleased. With only 8 watts to a rotatable dipole I have worked from EM75 (near Chattanooga, TN) into New England, FL, Mexico and CO.

Try http://www.tentec.com

73

Steve, K4YZ
Dunlap, TN
EM75

3649. Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: Linda Wolford <Miss-Linda@email.msn.com>
Message-ID: <#8U1z#2t$GA.306@cpmsnbbsa04>
Source record: 60854

I am interested in building my first homebrew reciever, not sure which design I want. Here's how I see it:

I want it single-signal (superhet) design

I need it to have, what Doug Demaw in his 'His Emminence (1976+/-) Receiver' design described as DYNAMIC RANGE. What seems so suprising is how the older design utilizing DIODE mixers appear to have this down better than the new fangled NE602 craze.

I want this receiver to separate nearby signals well FROM THE ONSET (the mixer and IF stages, etc), not just one that settles for second best in the front end and depend on an audio filter to make up for the poor front end and 'oversimplification' by leaving out additional mixer stages. I don't care how complex, or if it ends up having 200 knobs for selectivity, etc.

Also, any ideas on making the tuning capacitor work mechanically SUPER-SLOW.... I want a rig set up to be wide and slow, like taking a walk across some desolate E-W highway by foot, with towns thirty-plus miles in between one another! I think you get the idea!

Any sites where I could find schematics for these would be appreciated (or we could do a snail-mail, whatever)

Thanks Brad N4trc Miss-Linda@msn.com

3650. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: msix@nmia.com
Message-ID: <8f1n23$5dt$1@hume.nmia.com>
Source record: 60855
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Altho the specs look promising, all murata ceramic filters
I've tried suffer from poor skirt rejection. Fooling with
termination doesn't seem to help much.

A cheap solution is using the small ones in series.

Example. Using the simple 5 pin 2 element SFD455 in series
makes a pretty good filter if the element coupling caps are
around 10pF. Two in series is better than some of the multi
element filters and four in series gets quite good.
More gets proportionally better.

Since this is a multiplication process, the passband response
[0db] stays the same but the skirt selectivity improves remarkably.
If a skirt frequency is down 10db for one then it will be down
20db for two and 40db down for four in series.

Downside is insertion loss which also multiplies but this may
be compensated with a simple bipolar gain stage at the end
to recover signal level.

73 - John W7ZFB
1400 Catron SE Albq, NM 87123
****
* Homebrewer since 1947 CW BoatAnchors Norcal #930 *
* BA CW freqs - 3578, 7050, 7147, 14050, 21050, 28050 *
****

3651. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: ritter@io.com
Message-ID: <391471d3.2356565@news.io.com>
Source record: 60856

On Sat, 6 May 2000 11:20:18 -0400, in <#8U1z#2t$GA.306@cpmsnbbsa04>,
in rec.radio.amateur.homebrew "Linda Wolford"
<Miss-Linda@email.msn.com> wrote:

>I am interested in building my first homebrew reciever, not sure which
>design I want. Here's how I see it:
>
>I want it single-signal (superhet) design
>
>I need it to have, what Doug Demaw in his 'His Emminence (1976+/-) Receiver'
>design described as DYNAMIC RANGE. What seems so suprising is how the older
>design utilizing DIODE mixers appear to have this down better than the new
>fangled NE602 craze.

Surely, nobody is promoting the 80's NE602 in the signal path of in a
high-performance design. We do see it still in modern "simple"
receivers, or QRP low-current receivers.

>I want this receiver to separate nearby signals well FROM THE ONSET (the
>mixer and IF stages, etc), not just one that settles for second best in the
>front end and depend on an audio filter to make up for the poor front end
>and 'oversimplification' by leaving out additional mixer stages. I don't
>care how complex, or if it ends up having 200 knobs for selectivity, etc.

The "old style" dual-conversion 70's receiver with a tuned antenna LC,
a tuned RF LC, and a tuned osc LC certainly had some advantages in
cutting down out-of-passband signals. For single bands having all
those coils is not much of a problem, but we get a lot more complexity
in a general communications receiver. In that case maybe the best bet
is to find a broken-down tube model and take the tuning system.

Selectivity is available in ceramic filters of modest price, or
do-it-yourself crystal filters. Crystals are quite available.

Modern frequency accuracy and stability are crystal controlled, with
the 80's phase-locked loop (PLL) and 90's direct digital synthesis
(DDS) currently fighting it out.

>Also, any ideas on making the tuning capacitor work mechanically
>SUPER-SLOW.... I want a rig set up to be wide and slow, like taking a walk
>across some desolate E-W highway by foot, with towns thirty-plus miles in
>between one another! I think you get the idea!

There are various older options: 1) Get a super-slow mechanical
reduction drive; 2) Use a large bandset and a small bandspread (dual
or triple) in parallel; 3) Switch-select fixed caps (bandset) and use
the tuning cap as a bandspread. One could use varicaps with 10-turn

pots and even bandset/bandspread, but using varicaps anywhere there may be a strong signal can be tricky if we want high performance.

Nowadays, osc frequency is generally digitally-controlled, and that can be as slow as we want. After that, one option is to use no-tune bandpass filters for ant and RF. Another option is to go straight to broadband amplification, but then we have intermodulation issues which we might generally avoid by tuning out most strong signals. Really modern stuff does direct conversion with quadrature mixing and re-combines the results to select one sideband direction.

>Any sites where I could find schematics for these would be appreciated (or >we could do a snail-mail, whatever)

http://www.pan-tex.net/usr/r/receivers/

plus the 2000 ARRL Handbook.

My opinion.

Terry KF5MH

3652. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <3914ae65.212597428@news.erols.com>
Source record: 60857

Brad: Sounds pretty ambitious for a first time receiver builder. I'd
suggest starting out with something simple. But not too simple.
Definitely go for the superhet with single signal reception. I'm a
big fan of Doug DeMaw's Barebones Superhet. June 82 QST. Works
great! I added an RF stage. Lots of fun.

FB that you are planning on building a receiver. There are very few
RX builders out there. I'd say sitck with it, but I would advise
starting out with something a bit less complex than what you outlined.

Check out my web site for more info on the barebones receiver.

73 Bill N2CQR
http://www.erols.com/wmeara

On Sat, 6 May 2000 11:20:18 -0400, "Linda Wolford"
<Miss-Linda@email.msn.com> wrote:

>I am interested in building my first homebrew reciever, not sure which
>design I want. Here's how I see it:
>
>I want it single-signal (superhet) design
>
>I need it to have, what Doug Demaw in his 'His Emminence (1976+/-) Receiver'
>design described as DYNAMIC RANGE. What seems so suprising is how the older
>design utilizing DIODE mixers appear to have this down better than the new
>fangled NE602 craze.
>
>I want this receiver to separate nearby signals well FROM THE ONSET (the
>mixer and IF stages, etc), not just one that settles for second best in the
>front end and depend on an audio filter to make up for the poor front end
>and 'oversimplification' by leaving out additional mixer stages. I don't
>care how complex, or if it ends up having 200 knobs for selectivity, etc.
>
>Also, any ideas on making the tuning capacitor work mechanically
>SUPER-SLOW.... I want a rig set up to be wide and slow, like taking a walk
>across some desolate E-W highway by foot, with towns thirty-plus miles in
>between one another! I think you get the idea!
>
>Any sites where I could find schematics for these would be appreciated (or
>we could do a snail-mail, whatever)
>
>
> Thanks Brad N4trc Miss-Linda@msn.com
>
>

>

3653. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <eN%Q4.10427$X91.33727@news02>
Source record: 60858

A couple of thoughts:

Good old LM-10 Frequency meters have a very high ratio reduction gear driving a capacitor in them. Generaly they are available for $10 or so at Hamfests and on eBay. You can make a VERY slow tuning VFO with one of them. When I build a reciever based on one it cured me of the need to have a slow tuning radio (50 turns to go 10 KHz is just to slow.....)

Mini Circuits distributors will sell small quanities of some pretty high level double balanced mixers so that part of the equation should not be a problem.

High frequency (well above 455 KHz) crystal filters are a common item on eBay and you can generaly find them at most larger Hamfests. If you are designing from scratch the center frequency does not matter as much to you so you can buy the ones at odd frequencied (ie the cheap ones ...)

I'd recomend starting out with a single band single application reciever. That way it is a no compromise design AND you can finish it without spending large bundles of money. There is also a lot to be said for completing projects before they are eligable to vote ... need to learn that one myself :)

One example would be a 20 Meter reciever for PSK-31. It should be usefull when you are done and you can build one that will crush anything you can buy.

Just my two cents worth.

Bob

KB8TQ

3654. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <uTnqy25t$GA.265@cpmsnbbsa04>
Source record: 60859

Brad N4trc wrote in message <#8U1z#2t$GA.306@cpmsnbbsa04>...

>I am interested in building my first homebrew reciever, not sure which
>design I want. Here's how I see it:
>
snip

Building a first receiver is tough, but building a high performance one is nigh impossible for an inexperienced ham. A simple receiver successfully built will give you something with which to compare the later efforts. A couple of recommendations: Build something like the KK7B DC receiver, for 40 meters. His receiver, although not perfect, is light_years ahead of everything else. When you get tired of it, you can use it as the detector/audio portion of a superhet. The kits come in several flavors, and Kanga (Bill Kelsey) had them a few years ago. Why 40 meters? Well, 40 is where you can audibly test a receiver for robustness at any time after dark via the foreign broadcasters!!! The other bands are tame compared to 40 (except for field day or contest weekends). John Siebold has a site with tons of info on everything about the KK7B receiver. John has lurked around here at one time or another. Another recommended site is http://www.ac6v.com Rod has an excellent site, and it'll take months to run down all the good stuff.
While you are building, document it well. You may someday have material for a web page or a magazine article. Good luck on the construction and keep us on the NG posted.

Mike Lucas W5CHR
Memphis, Tenn.

3655. Live voice chat

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: MITBR <mitbr@earthlink.net>
Message-ID: <dz0R4.35439$g4.920100@newsread2.prod.itd.earthlink.net>
Source record: 60860
Cross-posted to: alt.ham-radio.fm,alt.ham-radio.hf,rec.radio.amateur.boatanchors,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Check out my live voice and text chat system dedicated to hams!! Set up a sched with someone, check the muf on hf six meters or set up satelite communications or just rag chew !! Why type when you can talk. Everyone is welcome. click on this url
http://home.earthlink.net/~mitbr/AmateurRadioChat.htm--
Please visit my web site url below
Tampa Bay Radio Page
http://home.earthlink.net/~mitbr/Mi01000.htm

3656. Resistive Matching and Attenuating pads.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-06 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8f1o6fbdk2@neptunium.btinternet.com>
Source record: 60861

DESIGN OF MATCHING PADS & ATTENUATORS

New program MATCHPAD.exe calculates component values of T and Pi
attenuating and matching networks for any source and load resistances
and any attenuation up to 80 dB. Special consideration for minimum
loss matching pads.

Download MATCHPAD in a few seconds from my website. Not zipped up. Run
immediately. User friendly. Has an educational content - sweep
attenuation over a wide range and watch resistor values change.
Compare T with Pi.
--
Regards, Reg, G4FGQ
==========
Free radio design software from : -
http://www.btinternet.com/~g4fgq.regp
==========

3657. DDS kits/cards available?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: dgf@netcom.com
Message-ID: <8f2n05$88l$1@slb1.atl.mindspring.net>
Source record: 60862

A while back someone was selling a small DDS kit (PC board, chip, etc.) - they're gone but now I have a need to make up four DDS oscillators (up to 260 MHz but I can use multipliers as needed); anyway I don't want to buy four eval boards from a DDS chip maker if I can avoid that because it would probably be much $. Any ideas otherwise?

73 Dave WB0GAZ dgf@netcom.com

3658. "INPUT" Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: whitneyrae@webtv.net
Message-ID: <14843-39150EE0-5@storefull-225.iap.bryant.webtv.net>
Source record: 60863

Hello all,
I am working with a 2SC1971 RF Transistor, my question is.....what
is the max, safe input of this transistor, i.e. .5 watts - 1watt
etc.... I need someone that can give me some idea so I don't waste alot
of good transistors.
Thank you,
Whitney....."yes I am a girl that likes radio"

3659. WTB @ DAYTON - Leftovers!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: mvgjr1@mvgsa.mv.lucent.com
Message-ID: <8f3749$p3m@nntpa.cb.lucent.com>
Source record: 60864
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

Looking to Buy (at the right price) any
leftovers at Dayton. Outside Exibit # 729
Also, may have room to bring your goodies back
to New Hampshire for you Air Travellers!
See you at Dayton 2000
73' Greg,KA1INX
www.recycledradio.com

3660. Official annoucement

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: cvsoelen <cv.s@net.HCC.nl>
Message-ID: <3915403F.36CE4E0B@net.HCC.nl>
Source record: 60865

Official announcement

All the hardware goodies related to the JRC NRD-515, were you already
may have heard off are now made public to everyone.
That is all sorts of modifications of the JRC memory unit (515 and 518)
and some for the NRD-515 receiver itself. Photographs available!
Also lots of info about the active aerial project and some info about a
huge (150 sq. meters) coaxial loop. Some words were spend on that loop
in the Dutch Electron monthly and that publication was referenced again
in the British Radcom. Now more first-hand info available!

Disclaimer remark: almost every modification demands a thorough
knowledge of the radio electronics and good soldering skill, or else
could certainly ruin your equipment. Total ruins are NOT our
responsibility.

Be amazed and see for yourself, go to:
http://web.inter.nl.net/hcc/Shortwave
click on index icon and go to the 515 subdivision

Soldering engineer: Walter Geeraert PE1ABR
Webmaster: Cor van Soelen NL10194

3661. QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Linda Wolford <Miss-Linda@email.msn.com>
Message-ID: <OC8dOPBu$GA.231@cpmsnbbsa03>
Source record: 60866

Thanks for the comments, folks.

I have the MFJ qrp rigs, based on the NE602... The sensitivity will pass, but the stability and especially the adjacent frequency rejection has much to be desired... I don't need luxuries such as digital displays, for it will be intended for portable work.

My understanding is that, by adding additional stages of mixing, then filtering, then amplifying, mixing then filtering then amplifying, mixing then filtering then amplifying, I can get better performance... And yes, forty is my first band of concern, but the ability to add front-end converters for twenty (at least) would be nice, too!

I have certification in electronics, so I can read schematics, and align and test, too (have a dip meter, a freq counter and VOM, too!). If I do one of these 'simple' jobs, I'll most likely get the same performance as these MFJ QRP CW rigs.

But maybe a modification to this MFJ rig could be suggested... additional stages of the same calibre? Better IF filtering? Where to place them in the existing circuit? I also noted that this rig appears to do a poor job of shielding the LO from the rest (unless they figure that the NE602 does all of this, somehow)... In most receivers that I have 'broken into', I see the tuning capacitor (at least) in its own shielded enclosure... maybe they figure that one single mixer stage doesn't produce enough to worry with on that point, but once again, look what it gives up in the process!

3662. Re: Antenna technology breakthrough

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <39157AA7.1F5814E@home.com>
Source record: 60867

USPTO stopped taking patents for perpetual motion machines in 1911 (I think that's the date.)

That being said, the patent is on the USPTO database and you can order a copy for $3.

Jack

Carl Clawson wrote:

> http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1#bsum
>
> Oh, and it also causes "accelerated plant growth." Must be the lamp.
> Carl WS7L

3663. Re: Dual Voltage Power Supply Metering?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <39157DF8.1CEF470A@home.com>
Source record: 60868

Jameco had some inexpensive 3 1/2 digit panel meters.

Brian Short wrote:

> I recently finished a small power supply for experimenting
> with various circuits (a "bench" supply).
>
> It has dual voltages, individually controllable (1.2 to 21.5 and
> -1.2 to -21.5) - as well as +/-12, +/-5, and +/-23 unregulated.
> Not a high current supply, just handy - I hope.
>
> Anyway, I left sufficient (I hope) space on the front panel
> for metering of the two variable voltages.
>
> I am now looking for suggestions for (inexpensively) adding
> metering to this supply, for example 3-digit digital readout
> XX.X or -XX.X etc of voltage (or possibly current also).
>
> Anyone know of (cheap, simple) 3 digit voltage meters that
> might be added to this project?
>
> Thanks, Brian
>
> --
> mailto: k7on@earthlink.net
> --

3664. Re: I caught my sister's best friend sleeping and took naughty pics of her. 13728

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Burt <k1oik@yahoo.com>
Message-ID: <4OcR4.4027$Ft1.236738@typhoon.ne.mediaone.net>
Source record: 60869
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

<stillme@home.net> wrote in message news:07050003.5456@home.net...
> http://preciousteens.majorhost.com
> http://fineteens.majorhost.com
> http://sleepingteens.majorhost.com
> Welcome to the Teen circle. We have everything from teens being spied on
to teens fucking. Cum check us out without having all the annoying banners
and popups. New pages are added daily!!!!!

Posting this in a ham radio group is insane.
Hams have no interest in sex.

Please visit my World Wide Web Site, you have never seen a page like it. You
will see:

1. Access to oldies mp3 (albeit on an irregular basis)
2. Really interesting answering machine messages
3. A blond naked chic being held by a female ham!.
4. A guide to the best ham pages ever.
5. Hear Ted Kennedy really screw up in front of Clinton
6. Actually sounds of Bill Clinton "after the lov'in".
7. The writings of me and others on ham radio, hear a typical ham contact.
8. The warm side of K1OIK, hear me speak, see me with famous people.
9. An amazing card game that will shock others
10. Pictures of me and my family.
11. Did common German's enable the holocaust?
12. See now the future of ham radio.
13. How to pass the A+ Certification

Burt Fisher
A Plus Certified Teacher of video, broadcasting and electronics
Amateur call South Dennis, Ma. (Cape Cod)
K1OIK Bacteria-the only culture most hams have

burt@broadcast.net
http://hfradio.org/k1oik/

3665. Re: "INPUT" Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <1rdR4.53100$WF.2892059@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60870

http://www.mitsubishichips.com/data/datasheets/hf-optic/vhf_discrete.htm
Transistors not in order, check down to 31st transistor.
Download pdf file for all the specs.

http://www.ideal.net.au/chipdir/pin/2sc1971.txt
Says 2SC1971 Si-NPN VHF 35V 2A 7W(175MHZ)

--
Mike Knowlton
Panama City Fl.

3666. vacuum tubes for sale

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: petee100@aol.com
Message-ID: <20000507091200.05653.00001711@ng-co1.aol.com>
Source record: 60871

I have about 550 vacuum tubes for sale. 90% are RCA, new and unused. The rest are slightly used and/or other brands. The list below shows the models available. The digit after the model indicates the quantity available.

Send me email at petee100@aol.com if you have an interest in purchasing these tubes. I would prefer to sell the whole lot rather than in bits and pieces but if you're interested in a few specific units let me know and we might be able to work something. Thanks.

Pete Enghauser, N4ACQ
Herndon, VA

OA2 7 6AS5 2 6CG8A 4 6SA7 1 OA3 2 6AS7G 1 6CL6 5 6SJ7 2 OB2 7 6AS8 1 6CX8 1 6SK7 1 OC3 1 6AT6 1 6CZ5 1 6SL7GT 6 OD3 1 6AU4GTA 1 6DE4 7 6SN7GT 2 1A7GT 1 6AU5GT 2 6DE7 7 6SR7 1 1AF4 1 6AU6 2 6DN7 1 6U8 8 1AX7 3 6AW8A 2 6DQ5 19 6V3 2 lB3GT 1 6AX4GT8 2 6DR7 2 6V6GT 23 1L4 1 6AZ8 2 6DS4 4 6W4GT 1 1R4 1 6BA6 3 6DS5 1 6X4 10 1S4 1 6BA7 1 6DT6 2 6X5GT 4 1S5 1 6BC5 2 6DT8 4 6X8 1 1T4 1 6BC8 1 6DW4 2 12AL5 1 1U4 1 6BD6 2 6EA8 1 12AT6 2 1V2 4 6BE6 6 6EB8 1 12AT7 3 1X2B 1 6BF6 1 6EH7 1 12AU6 2 313C 1 6BG6G 2 6EJ7 3 12AU7 6 3A3A 1 68H6 3 6EJ8 1 12AV6 2 3A3B 2 68J6 8 6EM5 1 12AV7 1 3A5 1 6BJ8 1 6EM7 6 12AX7 12 3CS6 1 6BK4 1 6EU7 2 12AY7 2 3Q4 2 68K4B 1 6EW6 7 12BA6 3S4 2 68K4C 2 6F5 1 12BA7 4
5AT8 1 6BK7B 7 6FQ7 4 12BE6 5 5R4GB 8 6BL7GTA 3 6GE5 2 12BH7 8 5U4GB 5 6BL8 2 6GF7 2 12BQ6GT 1 5U8 1 6BN6 9 6GH8A 1 12BY7 8 5V4CA 2 6BQ5 5 6GM6 4 12SA7 1 5Y3GT 2 68Q6GTB 3 6GM8 1 12SG7 1 523 1 6BQ7A 2 6GU7 1 12SK7GT 1 524 2 6BS8 3 6GX6 3 12SQ7 1 6A8 1 6BS8 1 6GY6 3 14A7 1 6AB4 3 6BU8 2 6H26 2 35C5 5 6AB7 2 6BV8 2 6J5 3 35W4 3 6AC7 3 6BX7GT 1 6J6A 5 3523 1 6AF4 1 6BY6 12 6J7 2 3525GT 1 6AG5 3 6BZ6 2 6JC6A 2 50A5 1 6AG7 1 6BZ7 1 6JD6 1 50B5 5 6AH6 1 6B28 1 6JE6A 1 50C5 7 6AK5 1 6C4 14 6JH6 2 5879 4 6AK6 1 6C85A 2 6JH8 1 807 2 6AM8 1 6C86A 7 6JU8A 10 811A 1 6AN8 2 6C88 1 6KA8 1 829B 2 6AN8A 1 6CD6GA 2 6KE8 1 83 2 6AQ5A 1 6CF6 2 6KM6 1 117L7GT 6AQ6 1 6CF7 1 6L6 4 117N7GT 6AQ7 1 6CG6 1 6LF8 5 6AQ8 1 6CG7 1 6LQ6 2 6AR5 2 6CG8 2 6S4A 1

3667. Re: QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <#zQ8seCu$GA.225@cpmsnbbsa03>
Source record: 60872

Brad N4trc wrote in message

>Thanks for the comments, folks.
>
> I have the MFJ qrp rigs, based on the NE602... The sensitivity will
>pass, but the stability and especially the adjacent frequency rejection has
>much to be desired... I don't need luxuries such as digital displays, for
it
>will be intended for portable work.
>
> My understanding is that, by adding additional stages of mixing, then
>filtering, then amplifying, mixing then filtering then amplifying, mixing
>then filtering then amplifying, I can get better performance... And yes,
>forty is my first band of concern, but the ability to add front-end
>converters for twenty (at least) would be nice, too!
>
Brad: If your standard of comparison is the MFJ rig, then about anything
you can solder up will outperform it. Don't equate "simple" with low
performance.
A simple receiver CAN have a low dynamic range, poor selectivity,frequency
instability, and a list of other complaints. But it is a certainty that if
you design and build a complex receiver (unless you are DJ2LR) that it
will perform worse in some areas than a basic receiver, and perhaps worse in
all of them.
Key to homebrew receiver design is to specify your requirements EXACTLY,
and then borrow just enough circuits from the available literature to meet
those requirements. One additional circuit lowers the performance!!! You
really threw a difficult task in by calling for portable operation. Portable
means wide temperature excursions and low power consumption, perhaps from
batteries or solar panels.
I recommended the KK7B series of kits and I'll again make that
suggestion: there are 3 different types (or styles if you prefer) of
receiver circuitry, plus a phasing exciter and the T/R board, so that a
complete QRP multi-mode rig can be assembled from one source. Rick's
circuitry was designed for high dynamic range, portable operation, and low
power consumption. The accompanying articles do an excellent job of
explaining the why's of receiver design.
A local op uses his JST-245 transceiver as the vfo for a KK7B receiver
on 40 meter packet. Works outstandingly well!!!
One of the other posts on this thread mentioned uncompleted projects
also: it is EASY to get started, difficult to finish. My receiver building
goes back to the late '50's, and I have more uncompleted projects than I
have completed ones. But there is no better feeling in this life than to
work a contact on a piece of gear you've built.

The best source of receiver information in one book is Hayward and Demaw's "Solid State Design for the Amateur". Published about 20 years ago, it's still the most practical guide around. Another must-read is Roy W7EL Lewallen's QST articles on QRP transceivers.
There is a wealth of info on receiver design out there, it's just not really simple to find and digest. While today's transceivers perform well, homebrew stuff can beat 'em in lots of areas when designed and built correctly.
Let's keep the receiver thread going!!!

Mike Lucas W5CHR
Memphis, Tenn

3668. Re: "INPUT" Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <KQeR4.11227$X91.40489@news02>
Source record: 60873

Whitney,

Since they show data on the data sheet up to 1 watt input I'd guess
that you are safe up to that point. Beyond a watt who knows .... I'd
bet at least 5 cents that you would be ok to 2 watts :)

Bob
KB8TQ

"Whitney Komenas" <whitneyrae@webtv.net> wrote in message
news:14843-39150EE0-5@storefull-225.iap.bryant.webtv.net...
> Hello all,
> I am working with a 2SC1971 RF Transistor, my question
is.....what
> is the max, safe input of this transistor, i.e. .5 watts - 1watt
> etc.... I need someone that can give me some idea so I don't waste
alot
> of good transistors.
> Thank you,
> Whitney....."yes I am a girl that likes radio"
>

3669. FS: insulator or paperweight

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000507112023.16844.00001965@ng-fz1.aol.com>
Source record: 60874

For sale, brand new, steatite antenna insulator. Can be used for that monster antenna or as a conversation piece or paperweight. You don't see these very often! White color, about 7.25 inches long, 1 and 5/8 wide, and 1 1/8 thick. Hole in each end about 3/8 inch diameter. Will sell for $3 and whatever the shipping costs will be. I have more than one if you'd like some as gifts. You won't flash this one over no matter how much power you run!

73

Evan

3670. MiniProp Plus

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Henry Knoll <knoll003@tc.umn.edu>
Message-ID: <39158E46.9D3@tc.umn.edu>
Source record: 60875

Does anyone know how to get the program MiniProp Plus? I understand the
author no longer sells it or supports it. E-mail me direct please.
Thanks
and 73.

Henry WA0GOZ

3671. Re: MiniProp Plus

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <3915931D.6EAC15E0@ix.netcom.com>
Source record: 60876

Henry Knoll wrote:

> Does anyone know how to get the program MiniProp Plus? I understand the
> author no longer sells it or supports it. E-mail me direct please.
> Thanks
> and 73.
>
> Henry WA0GOZ

=======
Henry -- try URL:
http://www.qsl.net/k7hg/software.html

Has a download for Miniprop but not the plus version. If W6EL was the author
of both of these -- you can E-Mail him via QRZ.COM

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

3672. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: maddog@io.com
Message-ID: <39159ab0.85853784@news.io.com>
Source record: 60877

On Mon, 24 Apr 2000 00:12:43 -0700, "Al Lorona" <alforo@megsinet.net>
wrote:

>I meant the yellow tape cost $2.50 not the pink one. Sorry.

Say, Al, does this tape have adhesive by any chance?

73,
monty N5FC

3673. Re: QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Gary Coffman <ke4zv@bellsouth.net>
Message-ID: <q9cbhs81qh58tsgjkgo7pppd3a95nlica3@4ax.com>
Source record: 60878

On Sun, 7 May 2000 06:34:44 -0400, "Linda Wolford" <Miss-Linda@email.msn.com> wrote:
>
> My understanding is that, by adding additional stages of mixing, then
>filtering, then amplifying, mixing then filtering then amplifying, mixing
>then filtering then amplifying, I can get better performance...

Your understanding is wrong. You want to use as few mixing stages
as practical to meet your image rejection and selectivity requirements.
More stages just produce more spurious products, more reciprocal
mixing problems due to phase noise from multiple LOs, birdies, etc.

With the advent of good high frequency crystal filters, a highest
performance superhetrodyne receiver will be single conversion
for any single HF ham band. Adding more conversion stages will
just degrade performance.

But if you want to cover all of HF, you'll need at least 2 conversions,
the first at a relatively high IF to get image rejection, and the second
at a lower IF to get sufficient skirt selectivity. If in addition you want
continuous coverage tuning, then you may need to go to 3 conversions,
with the first conversion being an up conversion to well above HF.
Perhaps you might even go to 4 conversions if you want passband
tuning. But those extra conversions cost you in terms of the ultimate
performance of the receiver on any single band.

Now the components of a single conversion receiver have to be chosen
appropriately, and the circuitry has to be designed and executed properly,
in order to realize the highest levels of performance. You can build a truely
awful single conversion receiver nearly as easily as you can build a truely
awful multiple conversion receiver. But if you use best effort in the design
of a single band single conversion receiver, it will be better than you can
achieve with best effort for a multiple conversion receiver.

A direct conversion *phasing* receiver, can actually be better than a
superhetrodyne if it is implemented properly. The KK7B design, modified
to use a DSP, as published in QST, and used with a preselector, will
produce *excellent* results. The biggest issue is lack of good AGC,
which means you may have to manually ride a front end attenuator in
some cases to maintain an adequate dynamic range. That can be
resolved with some small design changes.

You have to hear one of these setups to believe it. That something so
tiny and apparently simple can sound so good will open your eyes.
(It is simple only in terms of low parts count, however, the design is
very sophisticated in terms of being optimized for its very well defined
task.)

Gary
Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
534 Shannon Way | We break it |
Lawrenceville, GA | Guaranteed |

3674. Wanted Schematic diagram rogerbeep

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Robert <r.voerman@chello.nl>
Message-ID: <ZLkR4.23613$8_3.264222@nlnews00.chello.com>
Source record: 60879

Hello,
Who has a diagram of a rogerbeep that can produce a R or K and a beep?

Thanks Robert PD0PVL

Homepage : http://members1.chello.nl/~r.voerman/
Email : pd0pvl@amsat.org

3675. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <3915DF24.8F12812F@rsccd.org>
Source record: 60880
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Alan Douglas wrote:

> Hi,
> Pete Friedrichs wondered:
[snip]

> Lilienfeld's work gets rediscovered every few years. A good
> reference is Physics Today, February 1964, pp.24-26 and May 1964,
> pp.60-62. There is no evidence that his devices worked.

> Someone mentioned pulse operation of the curve tracer to avoid
> thermal effects. The commercial Tektronix tracers will do this, but
> I'm sure are too large an investment for a one-time project.

> 73, Alan

What would be awesome in my mind is to just make a simple audio oscillator with the homemade transistor, and some handmade coils and parts. Maybe hand wind a transformer. The claim that you had an amplifier that used a homemade transistor just by itself is a claim that almost no one else has made or can make. Even better would be to use some homemade batteries.

3676. Re: The first 500-MEGAwatt HT from Wal-Mart

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <3915F00B.5B185C69@rsccd.org>
Source record: 60881
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,sci.electronics.misc

Brock wrote:

> [Image]

I can't post an image to a non-binary ng, so you'll have to go to the alt.binaries.pictures.radio ng to see this.

3677. Re: Audio (modulation) transformer question...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Lizard Blizzard <nospam@rsccd.org>
Message-ID: <3915F781.7C387ABF@rsccd.org>
Source record: 60882
Cross-posted to: sci.electronics.basics,rec.radio.amateur.homebrew

JGinNY wrote:

> This question deals with audio or modulation transformers, and their
> impedance ratings:

> I am looking at a low-power radio transmitter circuit, which calls for a
> center-tapped AF transfomer to couple a single-ended, Class A modulator
> to the plate of a Class C RF amp tube. The circuit requires a 1:1
> impedance ratio for this coupling.

> The parts list indicates a 10,000 ohm AF output transformer. Only the
> primary winding is used, in autotransformer fashion. (That is, B+ goes
> to the center tap of the winding, one end of the winding goes the plate
> of the Class A modulator, and the opposite end goes to the plate of the
> Class C RF amp.)

> Question is -- if the goal is a 1:1 impedance "transformation" between
> the two stages, then what difference would it make if the tfmr impedance
> rating were something other than 10 Kohm? Wouldn't the stated
> impedance rating be inconsequential, as long as the windings were
> symmetrical about the center-tap, giving the desired 1:1 ratio?

> ...or does the 10 K-ohm value refer to the _resistance_ across the
> winding itself?

No, it's the impedance. The impedance is the square of the turns, so if
you take half the turns, you get a quarter of the impedance, looks like
2.5k per side for this setup. That sounds about right for an average
tube rig. You don't want to go too low because you won't get enough
modulation. Using the transformer like this balances the current in the
winding, so it doesn't saturate.

> thanks!
> J.

3678. Re: "INPUT" Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: bw201@torfree.net
Message-ID: <Fu7pL7.79z.0.queen@torfree.net>
Source record: 60883

Whitney Komenas (whitneyrae@webtv.net) wrote:
: Hello all,
: I am working with a 2SC1971 RF Transistor, my question is.....what
: is the max, safe input of this transistor, i.e. .5 watts - 1watt
: etc.... I need someone that can give me some idea so I don't waste alot
: of good transistors.
: Thank you,
: Whitney....."yes I am a girl that likes radio"

According to the Mitsubishi databook I have, at 13.5 volts at 175MHz, they up to 1.0 watt input (9.0 watts out) on an Output power vs. input power graph.

Another graph of Output power vs. collector supply voltage show trends for various inputs up to 0.8 watt at up to 16.0 volts collector supply (and at these ratings at 175MHz, they are showing about 9.4 watts out).

And the electrical characteristics chart (at 25C) says for 13.5 volts at 175MHz, with 0.6 watts in you will get a minimum of 6 watts out (7 watts typcially).

Under absolute maximum ratings, there is no such specification of maximum input power. Maximum collector current I believe is 1.2 Amps (though my data book seems to be missing the decimal point and reads 12 which it definitely is not since the 2SC1972, the higher power version is only 3.5 amperes). Maximum power dissipation at 25C case temperature is 12.5 watts.

Bob
Toronto, Canada

3679. Re: QRP RIG COMPARISON

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Cal Kutemeier <ckuter@ix.netcom.com>
Message-ID: <8f4vfuigb1@nntp9.atl.mindspring.net>
Source record: 60884

I just finished a DSW20 10 days ago. Easy for a first time construction kit to someone without a technical background. Instructions were very complete and the support by Dave Benson is excellent.

I live near Chicago and am happy with QSOs from British Columbia to Maine to Utah to North Carolina. 18 Q's in the QRPTTF and 8 in the Spartan sprints. Most reports were 55N or better, including non-contest Qs, which are usually 55N no matter what.

The features I like is that it always starts at 14.060 (QRP calling freq), the digital freq readout (that really spoils me) and the internal keyer.

There usually is a few week waiting list for the DSW series, so that should also tell you something.

73

KG9PQ

Cal

Jay Moyer <jmoyer43@earthlink.net> wrote in message
news:390BAA82.1DC2D825@earthlink.net...
> I have decided to build my first rig and have found plenty of rigs to
> chose from. I want a 20m rig but the choices are overwhelming. I have
> found the DSW20, SW20, OHR 100, GB20, NorCal20, Wilderness Radio SST and
> Sierra, RedHot20, and TenTec. Is there any articles available on the
> web or persons with personal experience that can help narrow down the
> choices as my knowledge in the subject is limited. Thank you
>
> Jay Moyer
> jsmoyer

3680. Learning how to troubleshoot

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Cal Kutemeier <ckuter@ix.netcom.com>
Message-ID: <8f4vp9$72n$1@slb0.atl.mindspring.net>
Source record: 60885

Is there an on-line resource or books to help someone learn how to use a digital multimeter - voltage, resistance, capacitance. Something like where to place the probes (one side grounded or not) with power on / off.

I am getting involved in QRP and would like to know how to check out my rigs.

Thanks

Cal

3681. Re: QRP rx...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Jim Pennell <spam@xspam.com>
Message-ID: <8f5cn6bef1@slb6.atl.mindspring.net>
Source record: 60886

True, using multiple IF's allow gain distribution, but that also results in relatively high signals into the second mixer. Presuming a high first IF, with a relatively broad filter, that increases the probability of intermod overload in the mixer.

Careful construction and shielding allows a lot of gain at one frequency. So, a single conversion is the best approach for good performance with "common" analog components.

And, for the purposes of QRP, I'm assuming CW, although SSB is certainly possible.

Personally, I like a superhet over direct conversion, although the KK7B design is very good. I just like the AGC and not having to do the quadrature RF and so on....

==========

If I remember the earlier comments correctly, 40 meters was the primary band. There's a design for a very good strong dynamic range with excellent selectivity 40 meter CW unit in the ARRL "QRP POWER".(originally from the march 1993 QEX).

This uses a diode DBM, 12 MHz crystals in the filters, with an input filter and an output filter for the IF to help the selectivity and to scrape off the wideband noise of the IF amplifiers.

I'd certainly recommend this a design to study and, perhaps, duplicate. It's about as good of a CW design as I've seen for a straight forward homebrewer 40 meter job.

Oh yeah, he chose 12 MHz, because it made the crystal filters work out to be 50 ohm IN/OUT. Cute.... And a good idea.

==========

I wrote a spur analysis program and found that 5 MHz crystals along with a 2.1 MHz VFO work for 7 MHz with few spurs, although the filter impedances are something like 250 - 300 ohms (depending on this and that).

Still, making a stable 2.1 MHz VCO is fairly simple, and 5 MHz timebase crystals are cheap.

Jim

==========

jpennell

---

at

ix.netcom ===(SPAM is no fun)=== .com

3682. New Rflector for Tube Buying & Selling

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Eugene Rippen <soundval@foothill.net>
Message-ID: <8f5d3pepg1@ns2.foothill.net>
Source record: 60887
Body handling: HTML body converted to readable text

To Annouce Vacuum Tubes that are offered for sale (at fixed prices), wanted
or offered for trade. Tubes may be listed to be sold to the best offer AT
A SPECIFIC CLOSING DATE AND TIME only. No postings may exceed 2 pages in
length.
Notices of off site auctions are OK within reason.
Use informative subject headings: And begin them with "FS", "WTB", "FT" or
"FA"

NO Commercial want-to-buy ads. "Wanted" ads may be repeated no more often
than ONCE a month.

NO OTHER EMAIL SUBJECTS ARE PERMITTED ON THIS LIST WITHOUT PRIOR APPROVAL OF
Gene at rippen@muchstuff.com.

ATTACHMENTS ARE NOT PERMITTED. USE ONLY PLAIN TEXT. NO COLORS.

To subscribe

Send to: tubes-subscribe@egroups.com
Don't have to say anything in the message portion.

3683. Re: Teflon insulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Al Lorona <alforo@megsinet.net>
Message-ID: <6YqR4.2880$GH.55178@news.corecomm.net>
Source record: 60888

maddog@io.com wrote in message >
>Say, Al, does this tape have adhesive by any chance?
>
>73,
>monty N5FC

No. They are all meant to be used as wrap around on threads on
plumbing/water pipes.

By the way, nurseries and gardening supply places sell rolls of1 inch wide
copper tape
with adhesive on one side. They are meant to be used as barriers against
snails but can probably find use in a ham shack. I bought a 15 foot roll for
5 bucks. I separated some from the adhesive strip to measure it and it is 5
mils thick. It is very easy to separate it from the adhesive strip - peels
right off.

73, AL w6wqc

3684. WTB: National NCL-2000 Amplifier/Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Henry Flores <hdflores@gbis.com>
Message-ID: <39163d17$1_1@news.greatbasin.net>
Source record: 60889
Cross-posted to: alt.ham-radio.hf,alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.swap

I want to buy dead or dying National NCL-2000 amplifiers and parts including cabinets and tubes. Email condition, price and location to:

hflores@zdnetonebox.com

Thanks,

Henry Flores
KD6UW
Reno, NV

3685. Re: Wanted Schematic diagram rogerbeep

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-07 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <QRrR4.4458$701.78511@news4.giganews.com>
Source record: 60890

Those things might be cute for the user, but they have to be in the top ten of things that annoy people. I just won't communicate with someone who uses those gadgets..

73, Bob K6DDX

3686. Re: QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <tSpR4.11923$X91.47861@news02>
Source record: 60795

Pete,

If you want to go way out and don't mind the software there are some pretty good 14 bit high speed ADC's out there that will digitize everything below 30 MHz all in one pass ....

Bob Camp
KB8TQ

"NANCY GIANAKOPOULOS" <n.gianakopoulos@worldnet.att.net> wrote in message
news:9LoR4.42927$PV.2960521@bgtnsc06-news.ops.worldnet.att.net...
> Mr. Coffman, you are correct in your assessment that it would be better to
> keep the number of conversions "down" but that a double conversion receiver
> is pretty much neccessary for a wide coverage. There is another reason
> where a double conversion design is advantageous, and that is in the area of
> gain distribution. One of the things I learned while working at
> Rockwell-Collins is never to have more than 80dB of gain at any one
> frequency; to distribute the gain at a couple of intermediate frequencies
> makes for a more stable receiver, as long as your circuit board layout
> provides for proper isotation between stages. I know that if a multiple
> conversion design is used, careful attention must be paid to selection of
> intermediate frequencies, in order to minimize the amount of in band spurs
> out of the mixers. What you said is on base, but I just wanted to add a
> couple of points.
> As far as your comment on direct conversion "phasing receivers" this
> appears to be the way that modern receiver designs are going; the Collins
> 95S receiver is a direct conversion design that covers from 5KHz to 2GHz,
> with demodulation taken from the I and Q signals being handled by a DSP, as
> well as the IF bandwidths. I have heard this receiver while I was working

> at Rockwell-Collins, and I can attest to its performance.
> Thanks for letting me throw my "two cents" worth in; it's good
to see
> people looking at new frontiers!
>
> Pete Gianakopoulos
> Chicago, Il.
>
> Gary Coffman <ke4zv@bellsouth.net> wrote in message
> news:q9cbhs81qh58tsgjkgo7pppd3a95nlica3@4ax.com...
> > On Sun, 7 May 2000 06:34:44 -0400, "Linda Wolford"
> <Miss-Linda@email.msn.com> wrote:
> > >
> > > My understanding is that, by adding additional stages of
mixing, then
> > >filtering, then amplifying, mixing then filtering then
amplifying, mixing
> > >then filtering then amplifying, I can get better performance...
> > >
> > Your understanding is wrong. You want to use as few mixing stages
> > as practical to meet your image rejection and selectivity
requirements.
> > More stages just produce more spurious products, more reciprocal
> > mixing problems due to phase noise from multiple LOs, birdies,
etc.
> > >
> > With the advent of good high frequency crystal filters, a highest
> > performance superhetrodyne receiver will be single conversion
> > for any single HF ham band. Adding more conversion stages will
> > just degrade performance.
> > >
> > But if you want to cover all of HF, you'll need at least 2
conversions,
> > the first at a relatively high IF to get image rejection, and the
second
> > at a lower IF to get sufficient skirt selectivity. If in addition
you want
> > *continuous* coverage tuning, then you may need to go to 3
conversions,
> > with the first conversion being an up conversion to well above HF.
> > Perhaps you might even go to 4 conversions if you want passband
> > tuning. But those extra conversions cost you in terms of the
ultimate
> > performance of the receiver on any single band.
> > >
> > Now the components of a single conversion receiver have to be
chosen
> > appropriately, and the circuitry has to be designed and executed
properly,
> > in order to realize the highest levels of performance. You can

build a
> truely
> > awful single conversion receiver nearly as easily as you can build
a
> truely
> > awful multiple conversion receiver. But if you use best effort in
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> design
> > of a single band single conversion receiver, it will be better
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> can
> > achieve with best effort for a multiple conversion receiver.
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> > A direct conversion *phasing* receiver, can actually be better
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> > superhetrodyne if it is implemented properly. The KK7B design,
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> > to use a DSP, as published in QST, and used with a preselector,
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> > produce *excellent* results. The biggest issue is lack of good
AGC,
> > which means you may have to manually ride a front end attenuator
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> > some cases to maintain an adequate dynamic range. That can be
> > resolved with some small design changes.
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> > You have to hear one of these setups to believe it. That something
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> > tiny and apparently simple can sound so good will open your eyes.
> > (It is simple only in terms of low parts count, however, the
design is
> > very sophisticated in terms of being optimized for its very well
defined
> > task.)
> >
> > Gary
> > Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
> > 534 Shannon Way | We break it |
> > Lawrenceville, GA | Guaranteed |
>
>

3687. Re: Wanted Schematic diagram rogerbeep

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <3916B301.54DD3833@ix.netcom.com>
Source record: 60796

Robert wrote:

> Hello,
> Who has a diagram of a rogerbeep that can produce a R or K and a beep?
>
> Thanks Robert PD0PVL
>
> Homepage : http://members1.chello.nl/~r.voerman/
> Email : pd0pvl@amsat.org

======
Hello Robert -- from the Google search engine at URL:
http://www.google.com/

Typing in "roger beep" brings up:
Rogerbeep (add on) by DL4MEA
Rogerbeep (C) DL4MEA 02/1998 12.02.1998 Text added D: Eine einfacher
Rogerbeep. Beim Einbau
mï¿½ssen keine Leitungen im Gerï¿½t unterbrochen werden. An J1-Pin2 wird
die PTT z.B. ...
www.qsl.net/dl4mea/roger.htm - Show matches (Cache) - 4k - Similar
pages

I can't get www.qsl.net/dl4mea/roger.htm to come up, but maybe u can or
contact DL4MEA
Clicking on the (Cache) will give an idea of what he has.

--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

3688. Re: Require an old hp23 heath pwr supply or equiv for project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Steve Bauder <sbauder@win.bright.net>
Message-ID: <3916F013.68981024@win.bright.net>
Source record: 60797

Earl:

I have an HP23A that I would sell for $50US + shipping from WI. I used it to power a Drake TR4, but the TR4 is long gone. The supply has not been turned on for appx 5 years.

73,
Steve NX9Z

earlve3ab@igs.net wrote:

> I require an old hp23 heath type power supply or equivilent to run an
> old piece of equipment hw12 im working on. I live near ottawa Ont.
> It need not even be working ..i could fix one up for my purposes.
> 73 Earl

3689. Re: QRP rx...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-0805001304450001@dialup-397.hip.cam.org>
Source record: 60798

In article <8f5cn6bef1@slb6.atl.mindspring.net>, "Jim Pennell"
<nobody@kill.spam.com> wrote:

> True, using multiple IF's allow gain distribution, but that also results
> in relatively high signals into the second mixer. Presuming a high first
> IF, with a relatively broad filter, that increases the probability of
> intermod overload in the mixer.
>
> Careful construction and shielding allows a lot of gain at one frequency.
> So, a single conversion is the best approach for good performance with
> "common" analog components.
>
> And, for the purposes of QRP, I'm assuming CW, although SSB is certainly
> possible.
>
> Personally, I like a superhet over direct conversion, although the KK7B
> design is very good. I just like the AGC and not having to do the
> quadrature RF and so on....
>
But gain distribution doesn't have to denote putting the filter later
in the chain.

There was a receiver in QST for May 1965, the "MIser's Dream" by Byron
Goodman, that used double conversion but the selectivity was all
in the first IF. The SSB filter was right after the 7360 mixer, and
then the CW filter was after a stage of amplification. He found he
had to put the product detector and BFO on a different frequency, because
otherwise the BFO was getting back into the IF and causing problems.
At first glance it looks silly, having a whole extra conversion (and
the tubes to do it) just to follow it with a simple diode product detector,
but if it makes the rest of the design simpler, then it is worth
examining.

One could put a really good filter after the first mixer, as long
as one can get it or is willing to pay the money (in the case of
a "roofing filter" somewhere above 30MHz), and as long as
the receiver is only going to receiver SSB or narrower signals. Once
you get into multimode and AM and even FM, the first filter has
to be much wider, and that will make the rest more difficult.

And remember, the desire for full coverage has driven the need for
up conversion. If someone is building a ham band only receiver, or
willing to have some gaps in general coverage, they can put the
IF in the HF range where there are good SSB-width filters, or where
ladder filters can be built. I'm not sure what that has to do

with gain distribution, but it does mean one can put a good filter right after the first mixer, and then convert to another frequency for other reasons.

It is silly to judge a receiver by how many conversions it has, like I often do see people do in rec.radio.shortwave Too many seem to think that dual conversion is better than single, and that triple is even better. The overall design is far more important. And no matter what you change, something else will come into effect.

Double conversion does add another overload-sensitive mixer, and another oscillator to worry about creating spurs, but in some cases it may make the rest of the design simpler. You have to look at everything, not just one stage.

I also gather that in cases where really good skirt selectivity is desired, a limiting factor is isolation around the filter. Adding a conversion and putting another filter at the second IF builds up the skirt, whereas working it all on one IF frequency requires an awful lof of work to isolate the stages and get an increase in skirt selectivity after a certain point.

Michael VE2BVW

3690. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8f6rru$kdo@nnrp1.farm.idt.net>
Source record: 60799

Reg Edwards <G4fgq.Regp@btinternet.com> wrote in message
news:8eqbt1$2ot$1@plutonium.btinternet.com...
>
> The not-very-useful values of loop inductance, radiation resistance
> and conductor resistance are no longer displayed.

These are the values I had to find when I built my homebrewed horizontal 1/2 wl square loop antenna for 6m!! I needed the feed point Z value (combined radiation resistance
and conductor resistance) to design the matching network so I used a MFJ 269 antenna analyzer to measure the value (12 to 14 ohms at resonance). The matching network I used was two paralleled 1/4 wl sections of RG-58 cable and the "capacitor" was totally unnecessary. I get a match of 1.1 to 1.2 at the center frequency of 50.200MHz and the 1.5:1 SWR bandwidth is around 450KHz.

You may not find the above of much use, but don't assume that others will not! If I did not have the little gem of an antenna analyzer I would have had to find some place/program to calculate the value.

--
Leland C. Scott
KC8LDO

3691. crystal manufactuers in USA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: ian@wireless-sparks.freeserve.co.uk
Message-ID: <3916f78a.22608155@news.freeserve.net>
Source record: 60800

Hi there,

Does anyone know of a crystal manufacturer in the USA willing to cut
crystals in only ones or twos below 1 MHz?

I require one or two HC6 or HC48 990 kHz fundamental parallel
resonance 30 pF load capacity.

UK manufactures are outrageously expensive at these frequencies for
one-offs!

Thanks,

Ian
===
ian@wireless-sparks.freeserve.co.uk

3692. One chip radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Bob Liesenfeld <wb0poq@visi.com>
Message-ID: <3916FBA0.8FFA9F48@visi.com>
Source record: 60801

Hi gang,

I just finished building the QK63 one chip AMBC radio from QKits

http://www.qkits.com/serv/qkits/diy/pages/QK63.asp

It is a TRF style rx that uses an MK484 IC which they say is a Japanese copy of the original ZN414. Works pretty good. The specs on the MK484 say it goes up to 3MHz, so it could make up an IF for a converter for the band of choice.

This might also be a good kit for some first time builders. The pads on the pcb are quite small, but there are few components so it should not present too much trouble for the newbie.

I have no connection to QKits. Just thought you folks might like a report.

72
Bob W0POQ

3693. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8f73j3$5ht$1@neptunium.btinternet.com>
Source record: 60802

Magloop4 program applies only to magloops where the feedline is not attached directly to the main loop.

Loop inductance is not displayed because it is only of use in calculating the value of the tuning capacitor - but the program already displays the tuning capacitance.

Radiation resistance, conductor resistance and ground loss resistance are not displayed because they are used to calculate radiating efficiency - a parameter whuch the program DOES display anyway.

The program computes and displays the diameter of the coupling loop required to transform the main loop resistances to a 50 ohms feedline. (Or to some other standard value if required.). Again, the loop builder needs no knowledge of radiation and othe resistances. He follows the program's computed dimension and uses his impedance meter just to check the 50-ohm feedpoint input resistance.

To predict feedpoint impedances of other types of loop use Eznec and similar programs. Yes, the relatively new antenna analysers really are 'little gems'.

Regards, Reg.
==========
http://www.btinternet.com/~g4fgq.regp
==========
Leland C. Scott <no-spam@junk-mail.net> wrote in message
news:8f6rru$kdo@nnrp1.farm.idt.net...
>
> Reg Edwards <G4fgq.Regp@btinternet.com> wrote in message
> news:8eqbt1$2ot$1@plutonium.btinternet.com...
> >
> > The not-very-useful values of loop inductance, radiation
resistance
> > and conductor resistance are no longer displayed.
>
> These are the values I had to find when I built my homebrewed
horizontal 1/2
> wl square loop antenna for 6m!! I needed the feed point Z value
(combined
> radiation resistance
> and conductor resistance) to design the matching network so I used a
MFJ 269
> antenna analyzer to measure the value (12 to 14 ohms at resonance).
The

> matching network I used was two paralleled 1/4 wl sections of RG-58
cable
> and the "capacitor" was totally unnecessary. I get a match of 1.1
to 1.2 at
> the center frequency of 50.200MHz and the 1.5:1 SWR bandwidth is
around
> 450KHz.
>
> You may not find the above of much use, but don't assume that others
will
> not! If I did not have the little gem of an antenna analyzer I would
have
> had to find some place/program to calculate the value.
>
> --
> Leland C. Scott
> KC8LDO
>
>

3694. 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <6DER4.11245$sB3.7414@news.indigo.ie>
Source record: 60803

Has anybody got any information about the Motorola
2N6367 transistor?

Thanks.

Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3695. Re: crystal manufactuers in USA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Grant NQ5T <nq5t@gte.net>
Message-ID: <3917283A.8D2F2831@gte.net>
Source record: 60804

Ian Liston-Smith wrote:
>
> Hi there,
>
> Does anyone know of a crystal manufacturer in the USA willing to cut
> crystals in only ones or twos below 1 MHz?

International Crystal (http://www.icmfg.com) and JAN Crystals will both
do it.

Problem is price -- about $75 US for crystals under 1 Mhz from IC. JAN
is a few dollars less, but still about $70.00.

Grant

3696. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <rzgZnVAq3yF5EwzC@ifwtech.demon.co.uk>
Source record: 60805

Reg Edwards wrote:
>Hi Mike, nice to see you take so much continued interest in my posts.
>What's in them which you find so atractive ?
>--
>Regards, Reg, G4FGQ
>==========
>http://www.btinternet.com/~g4fgq.regp
>==========
>Mike Lucas W5CHR <lucascom@email.msn.com> wrote in message
>news:OYZ7udit$GA.303@cpmsnbbsa04...
>>
>> Eamon Skelton wrote in message ...
>> >It would be nice to have a Linux version and a Mac version.
>Perhaps we
>> >could persuade Reg to put the source code on his web site?
>> >
>> Chortle, guffaw, ROTFLMAO!!! See Reg's posts about how he mistakenly
>equates
>> source code with algorithms. Lots of them in the past 6 months. :~)

Give Reg his due - the notes in SOLNOID2 say that the program is based on Nagaoka's work, so that pretty much ties down what the algorithms are.

There was a Tech Correspondence piece in QST for April 1992 (correction in June) which pointed out that this whole single layer solenoid problem was thoroughly worked out by about 1915! The formulas are as long as your arm, with elliptic integrals and suchlike, so they stayed in the textbooks until PCs made them practical.

As for the Linux/Mac versions, it's simply a matter of coding up the published formulas. All the references are in QST, along with simplified formulas.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

3697. WANTED: Info Midland 13-510 2 mtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: gbrefini@aol.com
Message-ID: <20000508181831.02264.00001667@ng-fx1.aol.com>
Source record: 60806

Need schematic for Midland mobile Model #13-510. Also, any info on how to get radio to work on MARS frequencies.....thanks

3698. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: marsgal42@hotmail.COM
Message-ID: <20000508221730.31133.qmail@hotmail.com>
Source record: 60807

A lot of these issues are really non-issues. If you want
dynamic range, use a high dynamic range front end with
proper mixer termination - a diode ring or a DMOS FET
mixer will do the job nicely. COnsider a switching
mixer built around a 74HC4066 or FST3125.

Selectivity: superheterodyne has nothing to do with
single-signal reception. That is a function of really
sharp filtering, or an image reject mixer.

As others have mentioned, the series of articles
published by KK7B in QST (and reprinted in QRP Power)
show what is possible. With modern components it
doesn't matter too much what order detection,
selection and amplification happen in...

Laura Halliday VA3LDH/7 "Que les nuages soient notre
Grid: CN89mg pied a terre..."
- Hospital/Shafte

_____
Get Your Private, Free E-mail from MSN Hotmail at http://www.hotmail.com

3699. Re: Formal complaint filed with BLUEMONGOOSE

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: ReferenceCount <rc@rc.not>
Message-ID: <8f7kod$9np$1@web1.cup.hp.com>
Source record: 60808
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

Moon Unit 376234+1/2 wrote in message ...
>Why not just ignore them instead?

Note that this spammer included the ad.

Don't be fooled.

The spammer is trying to start a discussion where
other people carry the payload.

rc

3700. Re: How does this circuit works??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <39176945.648EF96D@agilent.com>
Source record: 60809

I suppose the "code input" will modulate the input impedance of the transistor, and especially the input capacitance, causing a slight frequency shift because of the changing load on the resonator. There is presumably some amplitude change as well, though I would expect not very much; and your comment about a PLL receiver indicates that you are detecting the frequency modulation, not any incidental amplitude modulation. And I suppose the resonator must be a SAW (surface acoustic wave) resonator: 400MHz is a bit high for a standard quartz crystal unit. The transistor, of course, is acting as an oscillator/amplifier, its collector output coupled to the antenna.

Cheers,
Tom

Tom Roelandt wrote:
>
> Hi,
>
> I'm a belgian student electronics and we have to make a wireless modem. We
> use a PLL as receiver and a module, with the following scheme, as
> transmitter. Does anybody knows how this circuit works?
>
> Thanks a lot,
>
> Tom Roelandt
>
> [Image]

3701. Re: QRP rx...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Jim Pennell <spam@xspam.com>
Message-ID: <8f7v8k$u91$1@slb1.atl.mindspring.net>
Source record: 60810

Micheal Black Wrote:

>It is silly to judge a receiver by how many conversions it has,
>like I often do see people do in rec.radio.shortwave Too many
>seem to think that dual conversion is better than single, and
>that triple is even better. The overall design is far more
>important. And no matter what you change, something else will
>come into effect.
>
>Double conversion does add another overload-sensitive mixer, and
>another oscillator to worry about creating spurs, but in some
>cases it may make the rest of the design simpler. You have to
>look at everything, not just one stage.

==========

I agree with your comments. I was directing my message towards the original request for a monoband 40 meter that was reasonable for a homebrewer to tackle.

For general coverage, upconversion has a LOT to be said for it..... And, there are reasonable filters at those frequencies.

However, I would not recommend that sort of complexity for a first project.

Regards, Jim N6BIU

==========

jpennell
---
at

ix.--(nspam)---.netcom.com

3702. Question: Cascading bi-stable latching relays??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <39177A51.BC5EB312@nettally.com>
Source record: 60811
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.equipment

I have been trying to come up with a way to cascade three or four
bi-stable latching relays (DPDT) so that I can sequentially close one of
four circuits on each pulse.

The application is one of switching longwire antenna segments, (See my
inquiry about stepping relays on the sci.electronics.components NG for
more info):

1st pulse = East
2nd pulse = South
3rd pulse = West
4th pulse = North
and so on.

Get the idea?

Want to avoid active circuits requiring continuous power.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they
come
at you rapidly.

3703. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8f829b$sg2@nnrp1.farm.idt.net>
Source record: 60812

"Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
news:8f73j3$5ht$1@neptunium.btinternet.com...
> Magloop4 program applies only to magloops where the feedline is not
> attached directly to the main loop.
>
> The program computes and displays the diameter of the coupling loop
> required to transform the main loop resistances to a 50 ohms feedline.
> (Or to some other standard value if required.). Again, the loop
> builder needs no knowledge of radiation and othe resistances. He
> follows the program's computed dimension and uses his impedance meter
> just to check the 50-ohm feedpoint input resistance.

Reg, correct me if I am wrong. I had thought that a magloop antenna was nothing more than a antenna where the element is "electrically short" for the intended operating frequency. The tuning loop, and the capacitor form a simple 'L-Match" to transform the low loop impedance to the normal 50 ohms.

I had looked at the M-Squared "Ho-Loop" design and it appears to be a magloop type of antenna. From what I can see M-Squared "cut" the antenna length to give the required capacitive reactance without using a discrete capacitor. The matching loop is very cleverly designed as a shorted stub at the feed point, with the shorting bar (at the end of the stub), used to mount the antenna to the mast while providing a DC path to ground. Is this a correct analysis of the design? The reason why I am asking is for my own information. The M-Squared design was one that I had looked at as a model for a homebrewed 6m loop antenna design I was working on.

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse Code is used exclusively by Electronics Based life forms to communicate amongst themselves using advanced Organic Digital Signal Processors, running state of the art Artificial Intelligence Software, to perform the highly complex transmit encryption, receive decryption and error correction functions."

3704. Wavetek Manuals needed.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: "John D. Farr" <johnfarr@ro.com>
Message-ID: <NmMR4.4544$Up6.8799239@news-east.usenetserver.com>
Source record: 60813
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment

I need manuals for a Wavetek Model 1001A s/n 307243 and a Wavetek Model 1502 s/n 072806. Copies will do fine. I am willing to pay the cost of copying and shipping.
Thanks,

John D. Farr

3705. WTB: ~20ft RG214

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <391767FF.46CAE46A@agilent.com>
Source record: 60814

Hi all,

Anyone out there have some RG-214/U they'd like to sell me? I'm looking for about twenty feet. Must be silver-plated conductors, double-shielded.

Cheers,
Tom

k7itm@aol.com or tom_bruhns@agilent.com

3706. Require an old hp23 heath pwr supply or equiv for project

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <391681f1.1278872@news.igs.net>
Source record: 60891

I require an old hp23 heath type power supply or equivilent to run an
old piece of equipment hw12 im working on. I live near ottawa Ont.
It need not even be working ..i could fix one up for my purposes.
73 Earl

3707. Re: QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <39166d44@news.alphalink.com.au>
Source record: 60892

Linda Wolford <Miss-Linda@email.msn.com> wrote in message
news:OC8dOPBu$GA.231@cpmsnbbsa03...

> I have the MFJ qrp rigs, based on the NE602... The sensitivity will
> pass, but the stability and especially the adjacent frequency rejection
has
> much to be desired... I don't need luxuries such as digital displays, for
it
> will be intended for portable work.
>
> My understanding is that, by adding additional stages of mixing, then
> filtering, then amplifying, mixing then filtering then amplifying, mixing
> then filtering then amplifying, I can get better performance

Not necessarily. Good performance is quite possible with direct conversion, provided one is willing to put up with the audio image. I'm not sure if the MFJ is direct conversion or superhet, but I've had excellent results with the NN1G SW40+ , which is a superhet with NE602 and on-board VFO. Stability is OK and the crystal filter is selective enough.

If you wanted to experiment with direct conversion, I would suggest using a different mixer. I have built a DC RX that includes the following:

RF Amp: 2N4427
Mixer: 74HC4066
LO/Buffer: 74HC04 with 3.58 MHz ceramic resonator
Diplexer: As per KK7B
AF preamp: 3xBC548/2N2222 - as per KK7B
LPF: as per KK7B
AF: 4007 biased to linear

Performance is extremely good. The set covers 40 and 20 by switching in appropriate band pass filters before the mixer. Harmonic mixing is used - hence no VFO switching. The only problem is hum - it exists even when the set is
powered by an external battery. The box is metal and fully enclosed. \main strengths are dynamic range and audio fidelity.

73,

Peter VK3YE

3708. Re: The first 500-MEGAwatt HT from Wal-Mart

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: Tom Biasi <tombiasi@worldnet.att.net>
Message-ID: <RboR4.53617$fV.3326702@bgtnsc05-news.ops.worldnet.att.net>
Source record: 60893
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.cb,sci.electronics.misc

I saw the ad too, it brought a chuckle.

"Lizard Blizzard" <nospam@rsccd.org> wrote in message
news:3915F00B.5B185C69@rsccd.org...
> Brock wrote:
>
> > [Image]
>
> I can't post an image to a non-binary ng, so you'll have to go to the
> alt.binaries.pictures.radio ng to see this.

3709. Re: QRP rx... reply Terry, Mike, Bob, Bill De N4TRC

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-08 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <9LoR4.42927$PV.2960521@bgtnsc06-news.ops.worldnet.att.net>
Source record: 60894

Mr. Coffman, you are correct in your assessment that it would be better to keep the number of conversions "down" but that a double conversion receiver is pretty much neccessary for a wide coverage. There is another reason where a double conversion design is advantageous, and that is in the area of gain distribution. One of the things I learned while working at Rockwell-Collins is never to have more than 80dB of gain at any one frequency; to distribute the gain at a couple of intermediate frequencies makes for a more stable receiver, as long as your circuit board layout provides for proper isotation between stages. I know that if a multiple conversion design is used, careful attention must be paid to selection of intermediate frequencies, in order to minimize the amount of in band spurs out of the mixers. What you said is on base, but I just wanted to add a couple of points.
As far as your comment on direct conversion "phasing receivers" this appears to be the way that modern receiver designs are going; the Collins 95S receiver is a direct conversion design that covers from 5KHz to 2GHz, with demodulation taken from the I and Q signals being handled by a DSP, as well as the IF bandwidths. I have heard this receiver while I was working at Rockwell-Collins, and I can attest to its performance.
Thanks for letting me throw my "two cents" worth in; it's good to see people looking at new frontiers!

Pete Gianakopoulos
Chicago, Il.

Gary Coffman <ke4zv@bellsouth.net> wrote in message news:q9cbhs81qh58tsgjkgo7pppd3a95nlica3@4ax.com...
> On Sun, 7 May 2000 06:34:44 -0400, "Linda Wolford" <Miss-Linda@email.msn.com> wrote:
> >
> > My understanding is that, by adding additional stages of mixing, then
> >filtering, then amplifying, mixing then filtering then amplifying, mixing
> >then filtering then amplifying, I can get better performance...
>
> Your understanding is wrong. You want to use as few mixing stages
> as practical to meet your image rejection and selectivity requirements.
> More stages just produce more spurious products, more reciprocal
> mixing problems due to phase noise from multiple LOs, birdies, etc.
>
> With the advent of good high frequency crystal filters, a highest
> performance superhetrodyne receiver will be single conversion
> for any single HF ham band. Adding more conversion stages will
> just degrade performance.
>
> But if you want to cover all of HF, you'll need at least 2 conversions,

> the first at a relatively high IF to get image rejection, and the second
> at a lower IF to get sufficient skirt selectivity. If in addition you want
> *continuous* coverage tuning, then you may need to go to 3 conversions,
> with the first conversion being an up conversion to well above HF.
> Perhaps you might even go to 4 conversions if you want passband
> tuning. But those extra conversions cost you in terms of the ultimate
> performance of the receiver on any single band.
>
> Now the components of a single conversion receiver have to be chosen
> appropriately, and the circuitry has to be designed and executed properly,
> in order to realize the highest levels of performance. You can build a
truely
> awful single conversion receiver nearly as easily as you can build a
truely
> awful multiple conversion receiver. But if you use best effort in the
design
> of a single band single conversion receiver, it will be better than you
can
> achieve with best effort for a multiple conversion receiver.
>
> A direct conversion *phasing* receiver, can actually be better than a
> superhetrodyne if it is implemented properly. The KK7B design, modified
> to use a DSP, as published in QST, and used with a preselector, will
> produce *excellent* results. The biggest issue is lack of good AGC,
> which means you may have to manually ride a front end attenuator in
> some cases to maintain an adequate dynamic range. That can be
> resolved with some small design changes.
>
> You have to hear one of these setups to believe it. That something so
> tiny and apparently simple can sound so good will open your eyes.
> (It is simple only in terms of low parts count, however, the design is
> very sophisticated in terms of being optimized for its very well defined
> task.)
>
> Gary
> Gary Coffman KE4ZV | You make it |mail to ke4zv@bellsouth.net
> 534 Shannon Way | We break it |
> Lawrenceville, GA | Guaranteed |

3710. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: jmccarty@sun1307.ssd.usa.alcatel.com
Message-ID: <8f9t3p$h0j$1@relay1.dsccc.com>
Source record: 60745
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

You got a number of replies on this, all of which were good. I want to
add:

be sure you found out what caused the regulator to fail

This regulator supports current limiting, and even current foldback. In
a properly designed circuit, it should *not* have failed. I suspect you
may have a pass transistor which has also failed.

Anyway, just want to prevent you putting in a new IC and having it fail
right away.

Mike

In article <pQXR4.811$J5.41192@stones>,
Reg <reg@lakeside0.free-online.co.uk> wrote:
)Hi Group,
)
)could anyone help me with getting my CB Type PSU going.
)
)I have traced the fault to an IC (MC1723CP) but can't find any
)replacement :(
)
)Any help please
)
)Cheers
)Reg
)
)

--
----
char *p="char *p=%c%s%c;main(){printf(p,34,p,34);}";main(){printf(p,34,p,34);}
This message made from 100% recycled bits.
I don't speak for Alcatel <- They make me say that.

3711. Re: 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: JOHN <johnNOjoSPAM@thirdeye30.freeserve.co.uk.invalid>
Message-ID: <0d7e4687.54c3809f@usw-ex0104-026.remarq.com>
Source record: 60746

Look in TOWERS' INTERNATIONAL TRANSISTOR SELECTOR page 75.
it is an x29 case style. no alternatives listed.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

3712. Re: How does this circuit works??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <39187047.86E9A1D2@agilent.com>
Source record: 60747

Yep, that's the way I see it. I'd be really reluctant to try to put
something like that into production because the freq shift isn't very
well controlled, but for hobby/learning applications it's probably
fine. If you did it with, say, a 50MHz crystal, I'd expect it would
shift on the order of 1kHz or less. You can get a lot larger shift
using a varicap diode.

Cheers,
Tom

Rick Haub wrote:

> So what he's got here is a (fairly) standard crystal controlled oscilator that
> has its frequecy modulated by the incomeing code? I'm assuming that the code is
> binary and therefor this circuit would act much like an FSK transmitter. I
> think.
>
> Rick KC0GIX
>
> >
> > Tom Roelandt wrote:
> > >
> > > Hi,
> > >
> > > I'm a belgian student electronics and we have to make a wireless modem. We
> > > use a PLL as receiver and a module, with the following scheme, as
> > > transmitter. Does anybody knows how this circuit works?
> > >
> > > Thanks a lot,
> > >
> > > Tom Roelandt
> > >
> > > [Image]

3713. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <39188563.41C67EA6@my-deja.com>
Source record: 60748
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Reg wrote:
>
> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg

Reg,

The replacement for the MC1723CP should be the LM723 from
National. If you go to "http://www.digikey.com" and do
a search on "lm723" you can find them. I don't remember
what kind of package the MC1723CP was but it looks like
DigiKey has the 14-Dip, TO-99 and TO-100 versions.

However, be very careful about suspecting the "723". This
has always been a very reliable chip and seldom is the problem.
Usually the problem is in the feedback. But then, they only
cost $1 each so it may be just as easy to change it. The
spec sheet for the "723" is also available on the DigiKey site.

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

3714. Re: 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <XI0S4.11593$sB3.7500@news.indigo.ie>
Source record: 60749

>Eamon,
>
>Is this a correct part number? What case style?
>I've looked thru all my Moto sources here at
>work and still can't find it in the retired list.
>
> Chuck KD9JQ

Hello Chuck,

It's a ceramic, bolt on thingy. A kind gentleman
in VE6 land sent me the following info:

2N6367

20w
2a
ft=50 MHz
hfe 28 typ
ce=18 vdc
cb =36 vdc

Thanks to all who replied.

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3715. Re: looking for SSB40M transceivers shematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <Yl0S4.11594$sB3.7500@news.indigo.ie>
Source record: 60750

>Eamon, I couldn't get that link to work and would like to see the circuit.
>I have a few junk CBs laying around.
>Dan
>KB9JLO

Hello Dan,

qsl.net has been very unreliable for the last few days. It was working
fine at 17:30 today. Their ftp server is down too. I've been trying
to upload some files for the last two days :-(They are re-locating
their web and ftp servers.

Try again: http://www.qsl.net/ei9gq

I haven't tried it myself, but check the European mirror at:

http://www-dl.qsl.net

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3716. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <Pu0S4.11599$sB3.7597@news.indigo.ie>
Source record: 60751
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

>Hi Group,
>
>could anyone help me with getting my CB Type PSU going.
>
>I have traced the fault to an IC (MC1723CP) but can't find any
>replacement :(
>
>Any help please
>
>Cheers
>Reg

Is it a 14 pin DIL chip? It's probably the Motorola version
of the 723 regulator. The LM723 should be a suitable replacement.

About 40p from Grandata or about a quid from Viewcom.

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3717. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dale Wiljanen <dalewilj@swbell.net>
Message-ID: <FI3S4.259$Rk6.43820@nnrp3.sbc.net>
Source record: 60752

test

3718. test

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dale Wiljanen <dalewilj@swbell.net>
Message-ID: <GI3S4.260$Rk6.43791@nnrp3.sbc.net>
Source record: 60753

test

3719. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <3918CA80.2944FF16@bellsouth.net>
Source record: 60754

Leland C. Scott wrote:

> Dale Parfitt <parinc@bellsouth.net> wrote in message
> news:3917FB76.E7C25D48@bellsouth.net...
> > Hi Leland,
> > The HO loop is actually close to a half wave in length. Resonance is
> restored by
> > capacity coupling of the far ends. Pattern measurements (and modeling)
> show it
> > to be eggshaped.
>
> Dale, do you know anyone who uses the M-Squared 6m Ho-Loop for mobile work?
> What I have for my apartment (homebrewed 1/2 wl loop) works OK, but will not
> standup to a mobile application. I have been looking at mobile 6m antennas
> for SSB use and the M-Squared design is one of them.
>
> --
> Leland C. Scott
> KC8LDO

Leland,
Please give me your E-Mail address.

Dale W4OP

3720. Re: Pls explain -- eliminating hum in speech amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <W46S4.69180$MB.1448995@news6.giganews.com>
Source record: 60755
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

The rationale for that hint is that some tubes have heater-to-cathode leakage that causes hum in the amplifier. Raising the heater potential reverse biases the parasitic diode that the heater and cathode create, and prevents current.

The whole thing is rather worthless actually. If you have hum from that cause, you need to replace the tubes with good ones that don't have heater-cathode leakage.

The amount of potential required is such that, even on the peaks of the heater supply, the diode never gets forward biased. So the value given applies to 6.3 Volt systems.

In general, if you have hum, the way to eliminate it is first to find the cause, then take measures to eliminate it. The scheme above only works if that's the source of the hum.

73, Bob K6DDX

3721. Re: Build: Inductance Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <Sf6S4.67882$VR.1355309@news5.giganews.com>
Source record: 60756

There are many ways to measure inductance. If you want to have a digital voltmeter indicate inductance directly, you need to supply a constant current to the unknown inductor, at a frequency where it has reasonable Q. The amount of current needs to be carefully calibrated so as to provide a voltage across the unknown that will correspond to the inductance directly. For instance, one millivolt per microhenry. You can make the calculation.

I wouldn't use a tuned circuit or a bridge, since the output from either will NOT be directly proportional to inductance, and therefore you won't be able to read inductance directly.

To avoid having to measure the high frequency with your voltmeter, you simply rectify it with a germanium diode and read it on a DC range. Due to the forward drop of the diode, you will have to have a fairly high current so that the meter will read several volts. Very xmall voltages across the coil will not give any output from the rectifier. You can, of course, add an amplifier and solve that one, but it will have to have a wide bandwidth, sufficient for any frequency you are likely to use.

73, Bob K6DDX

3722. FS:DB408

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: hacker <dbraggs@hcis.net>
Message-ID: <3919648f$0$24072@wodc7nh7.news.uu.net>
Source record: 60757

JUST EMAIL ME FOR MORE INFO.

3723. Re: Homebrew thermo-controller?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: 123 <yano@home.com>
Message-ID: <xYNR4.132309$l41.550291@news1.sshe1.sk.home.com>
Source record: 60815

Use a Zero Voltage Switch IC like a CA3059/79 ECG 914 with a thermistor
and a Triac as per RCA Power Control Applications Manual.

Total cost < $10.00

Yukio
" >
> ps- again, sorry for the non-radio question... but I figured who better
> to ask than my ham pals!!

3724. Australian-New Zealand QRP Mailing List

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <391863ef@news.alphalink.com.au>
Source record: 60816

Those interested in QRP activity and homebrewing in Australia and
New Zealand are invited to subscribe to the VK-ZL QRP Mailing
List. Recent discussions have included talk on DC receivers and
various types of audio amplifiers for same.

You can subscribe to the list by following the links from the Australian
QRP Home Page at http://www.alphalink.com.au/~parkerp/qrp.htm

73,

--
Peter Parker VK3YE

3725. Re: crystal manufactuers in USA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <3917F147.E4887C3F@NOSPAMwcom.com>
Source record: 60817

Also try Peterson, Sentry, and Salvory. Peterson is out of Iowa, Sentry and Salvory are out of OK.

3726. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <3917FB76.E7C25D48@bellsouth.net>
Source record: 60818

Leland C. Scott wrote:

> "Reg Edwards" <G4fgq.Regp@btinternet.com> wrote in message
> news:8f73j3$5ht$1@neptunium.btinternet.com...
> > Magloop4 program applies only to magloops where the feedline is not
> > attached directly to the main loop.
> >
> > The program computes and displays the diameter of the coupling loop
> > required to transform the main loop resistances to a 50 ohms feedline.
> > (Or to some other standard value if required.). Again, the loop
> > builder needs no knowledge of radiation and othe resistances. He
> > follows the program's computed dimension and uses his impedance meter
> > just to check the 50-ohm feedpoint input resistance.
>
> Reg, correct me if I am wrong. I had thought that a magloop antenna was
> nothing more than a antenna where the element is "electrically short" for
> the intended operating frequency. The tuning loop, and the capacitor form a
> simple 'L-Match" to transform the low loop impedance to the normal 50 ohms.
>
> I had looked at the M-Squared "Ho-Loop" design and it appears to be a
> magloop type of antenna. From what I can see M-Squared "cut" the antenna
> length to give the required capacitive reactance without using a discrete
> capacitor. The matching loop is very cleverly designed as a shorted stub at
> the feed point, with the shorting bar (at the end of the stub), used to
> mount the antenna to the mast while providing a DC path to ground. Is this a
> correct analysis of the design? The reason why I am asking is for my own
> information. The M-Squared design was one that I had looked at as a model
> for a homebrewed 6m loop antenna design I was working on.
>
> --
> 73's,
>
> Leland C. Scott
> KC8LDO
>

Hi Leland,
The HO loop is actually close to a half wave in length. Resonance is restored by capacity coupling of the far ends. Pattern measurements (and modeling) show it to be eggshaped.

W4OP

3727. Re: Question: Cascading bi-stable latching relays??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: "Charles W. Shults III" <aichip@gdi.net>
Message-ID: <39180278.1664C203@gdi.net>
Source record: 60819
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.equipment

Hi, Joe.
You are applying a pulse each time you switch, correct? So, each relay can close a circuit when it is latched on, also correct? Why not make this the path to energize the next relay? That path will vanish once the relay switches and then the -next- relay will be the only one that can switch...

Cheers!

Chip Shults

SPAM free Email - aichip@gdi.udu.net but remove the .baryon

PGP \\ 8B27 CFD5 AAD5 67EA BF00
Key // 7529 9CF6 C3D7 233C D4D9

3728. Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Wilbur <nospm@home.com>
Message-ID: <3917F5F0.1B7@home.com>
Source record: 60820

Anyone know why useable ferrite rods can't be homebrewed---anyone have experience making their own?

I'd like experiment with rods .75" in diameter and 12" long or longer for VLF/HF but I sure don't want to pay the big money asked for them---some rods go for $100! I've heard of lab bench work where ferrite powder is mixed with epoxy then poured into molds. Although I haven't priced powder I suspect it's a small percentage of cost in the finished component.

3729. Re: WANTED: Info Midland 13-510 2 mtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8f919c$1fna$1@ausnews.austin.ibm.com>
Source record: 60821

In <20000508181831.02264.00001667@ng-fx1.aol.com>, gbrefini@aol.com (GBREFINI) writes:
>Need schematic for Midland mobile Model #13-510. Also, any info on how to get
>radio to work on MARS frequencies.....thanks

I think I still have a copy of the manual for a Midland model #13-510, and,
if I remember correctly, it has a schematic in it. Drop me a note at wa4qal
at ix.netcom.com to give me your address and I'll see if I can get
it copied and mailed to you.

As for moving it over to the MARS frequencies, I think you're going to be
out of luck. I don't recall any jumpers or any other way to change the
synthesizer to enable it for out of band work. You might be able to rewire
the synthesizer, but finding information on the synthesizer chips might be a
bit hard to do; after all, the radio is about 25 years old now.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3730. sprongII software

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dave Barillo <dbarillo@earthlink.net>
Message-ID: <3918393B.4C76FE44@earthlink.net>
Source record: 60822
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Has anyone uses SprongII software
(www.geocities.com/motorcity/Pit/9510/) ??
This is a windows interfact to program EPROMS for the syntor X and
MCX100
does it work?

3731. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <391820C9.4EE4@ixpres.com>
Source record: 60823

Linda Wolford wrote:
>
Brad OM,

I highly recommend you take a look at the "R2" DC phasing receiver, originally designed by Rick Campbell, Jan 93 QST. You can get the bare boards from Kanga. Hundreds of these receivers have been built. I am very pleased with mine. I am getting 50 dB of opposite sideband rejection with it, by hand-selecting the audio phase shift and diplexer parts. Single-signal reception does not mean you must use a much more complex superhet design! And, the beautiful sounding audio of DC receivers is a plus.
Also, save yourself from building and tweaking LC-tuned LO's. Build a simple AD9850-based DDS VFO, as described on the NJ QRP web page. It is Pruett's design from QEX article, as improved by AA0CD and others. Covers DC to 30+ MHz in 1 Hz steps, with LCD display (for those who feel they just have to have a "display" of something). The board for this VFO is also available from Bill Kelsey at Kanga, I think. Together, these two make a really nifty receiver for any band(s) of choice.
Also, providing for several bandwidths is much easier at audio (no crystal filters to build or buy), and with DSP back ends coming along, why fool with a superhet design any more?
73 and GL,

Don, W6JL

> I am interested in building my first homebrew reciever, not sure which
> design I want. Here's how I see it:
>
> I want it single-signal (superhet) design
>
> I need it to have, what Doug Demaw in his 'His Emminence (1976+/-) Receiver'
> design described as DYNAMIC RANGE. What seems so suprising is how the older
> design utilizing DIODE mixers appear to have this down better than the new
> fangled NE602 craze.
>
> I want this receiver to separate nearby signals well FROM THE ONSET (the
> mixer and IF stages, etc), not just one that settles for second best in the
> front end and depend on an audio filter to make up for the poor front end
> and 'oversimplification' by leaving out additional mixer stages. I don't
> care how complex, or if it ends up having 200 knobs for selectivity, etc.
>
> Also, any ideas on making the tuning capacitor work mechanically
> SUPER-SLOW.... I want a rig set up to be wide and slow, like taking a walk
> across some desolate E-W highway by foot, with towns thirty-plus miles in

> between one another! I think you get the idea!
>
> Any sites where I could find schematics for these would be appreciated (or
> we could do a snail-mail, whatever)
>
> Thanks Brad N4trc Miss-Linda@msn.com

--
ï¿½ï¿½à¡±ï¿½

3732. QRP AMP 30 with a LARGE SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <SjVR4.1018$R12.19697@news.itd.umich.edu>
Source record: 60824

Hello

I own a Ramsey QRP 30 CW transmitter. It can produce about 1 watt of power. I have it driving a Ramsey QRP AMP 30. This is tied into my MFJ Transmatch/SWR Bridge.

When I connect the Transmitter directly to the transmatch, I can adjust the minimal reflected power down.

When I connect the transmitter through the linear with the linear direct to the transmatch, I can not get the reflected power adjusted out. The SWR reads at 5:1. I can adjust out some but it is still at 3:1.

My antenna is a multiband dipole cut for 10.108, 14.060, 21.150 and 28.200. There is a balun at the apex of the inverted "V". The balun is rated for more power than my Heathkit can produce.

Why is it that the linear is affecting the reflected power so much?

I have a theory. The linear uses 2 FETs in a class C (? on type), one fet for the positive going pulse and one fet for the negative going pulse in a wideband transformer arrangement. If one of the FETs fails, could it cause a clipping of the signal at the neutral point thus producing peaks at 1/2 the fundamental and therefore causing a high SWR due to the lower frequency?

Has the Balun gone bad? I would hope not as the transmitter has no problem with high SWR.

I have gone over all the connections with a fine tooth and on the questionable ones I backed the solder up with a piece of copper wire to insure the trace conductivity.

Thanks in advance for your help.

Curtis SCholl
cscholl@izzy.net

KG8SU

3733. Re: 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <3918273C.4BDDDC0@email.mot.com>
Source record: 60825

Eamon,

Is this a correct part number? What case style?
I've looked thru all my Moto sources here at
work and still can't find it in the retired list.

Chuck KD9JQ

Eamon Skelton wrote:

> Has anybody got any information about the Motorola
> 2N6367 transistor?
>
> Thanks.
>
> Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://www.qsl.net/ei9gq

--
Regards,

Charles Reichert

Motorola NSS ACE phone: 847-632-6669 Work
IL-82 3436S fax: 847-632-7428 Work
1501 W. Shure Drive email: qa2696@email.mot.com
Arlington Hgts, IL. 60004

3734. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: me <robertbaer@earthlink.net>
Message-ID: <391832F0.C3DCEF83@earthlink.net>
Source record: 60826
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics,sci.electronics.components,sci.electronics.equipment

Lizard Blizzard wrote:
>
> Alan Douglas wrote:
>
> > Hi,
> > Pete Friedrichs wondered:
> [snip]
>
> > Lilienfeld's work gets rediscovered every few years. A good
> > reference is Physics Today, February 1964, pp.24-26 and May 1964,
> > pp.60-62. There is no evidence that his devices worked.
>
> > Someone mentioned pulse operation of the curve tracer to avoid
> > thermal effects. The commercial Tektronix tracers will do this, but
> > I'm sure are too large an investment for a one-time project.
>
> > 73, Alan
>
> What would be awesome in my mind is to just make a simple audio
> oscillator with the homemade transistor, and some handmade coils and
> parts. Maybe hand wind a transformer. The claim that you had an
> amplifier that used a homemade transistor just by itself is a claim that
> almost no one else has made or can make. Even better would be to use
> some homemade batteries.

You mean that Lilienfeld's transistors were unreliable and had very
low gain, usually betas less than one, and the FETs were poor also.
However, he clearly knew what he was doing; after all, he had at least
three patents in his favor, about 20 years before someone copied his
patent wording...

3735. New Resource For Investors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: meir@investmove.COM
Message-ID: <EXB9JH53.8IH30618@investmove.com>
Source record: 60827

Hi,

I would like to introduce our new site and kindly request
that you add InvestMove.com <http://www.investmove.com>
to your Links/Resources page (or please forward this message
to the person who is responsible for maintaining your Web
site). This will provide your visitors with a very useful
and information packed resource. InvestMove.com allows
investors and analysts free access to vital stock market
information.

In recognition of its usefulness, InvestMove.com has been
awarded recently with the prestigious USA Today Hot Site award.

InvestMove.com features a unique tool that allows visitors to
enter a company symbol into a search form and obtain a customized
page covering more than 30 major information categories about
that specific company. The information includes: stock quotes,
stock performance, earnings estimates, stock valuation, company
performance, analyst opinions, broker reports, company profile,
and much much more.

Another feature of the site is an investor resources directory
that includes links to the best investment sites on the web.

Linking to InvestMove.com helps you to add value to your website
by presenting your visitors with a useful free investor resource.
Your visitors will find here all the tools and information needed
to make educated investment decisions, and it's all completely free.

In addition, links to relevant and popular sites are known to
increase a Web site's "popularity ranking" in some major search
engines. In other words, linking to http://www.investmove.com may
actually help increase your Web site's rank in certain search engines
that record this external link.

Thank you in advance

Meir Liraz,
InvestMove.Com

3736. Re: QRP AMP 30 with a LARGE SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8f9bkr$cgb4@icet.net.nih.gov>
Source record: 60828

Curtis Scholl (cscholl@izzy.net) wrote:
: Hello
:
: I own a Ramsey QRP 30 CW transmitter. It can produce about 1 watt of
: power. I have it driving a Ramsey QRP AMP 30. This is tied into my MFJ
: Transmatch/SWR Bridge.
:
: When I connect the Transmitter directly to the transmatch, I can adjust
: the minimal reflected power down.
:
: When I connect the transmitter through the linear with the linear direct
: to the transmatch, I can not get the reflected power adjusted out. The SWR
: reads at 5:1. I can adjust out some but it is still at 3:1.
:

Some things to think about.
1) Many SWR bridges do not read accurately in the presence of high
RF. RF leaks into the circuitry and makes all meter readings high.
This is especially true if there is a lot of RF on the outside
of the coax or the antenna is near the shack.
2) Any signal from the amplifier that is not on the "transmit" frequency
will give a high reflected power. Non-linearities, harmonics, oscillations
due to poor neutralization, or arcing at a bad coax connection can do
this. A spectrum analyzer might be very helpful.

- Andy
arm@gnode.org
--

3737. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Donald R Montgomery <donrm@sr.hp.com>
Message-ID: <8f9d61$5sa$1@nirvana.sr.hp.com>
Source record: 60829

Michael Jones <mikej@scsitools.com> wrote:
> I can't find that issue - could you post the web paths that you mentioned?

try www.elecraft.com - they have a pretty extensive web page.
The review article was in QST for March 2000, page 69

73 Don K6LTS
donrm@sr.hp.com

3738. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8f9d59$puv@nnrp4.farm.idt.net>
Source record: 60830

Dale Parfitt <parinc@bellsouth.net> wrote in message
news:3917FB76.E7C25D48@bellsouth.net...
> Hi Leland,
> The HO loop is actually close to a half wave in length. Resonance is
restored by
> capacity coupling of the far ends. Pattern measurements (and modeling)
show it
> to be eggshaped.

Dale, do you know anyone who uses the M-Squared 6m Ho-Loop for mobile work?
What I have for my apartment (homebrewed 1/2 wl loop) works OK, but will not
standup to a mobile application. I have been looking at mobile 6m antennas
for SSB use and the M-Squared design is one of them.

--
Leland C. Scott
KC8LDO

3739. Re: How does this circuit works??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <391839BC.CE653FC8@midwestmicro-tek.com>
Source record: 60831

Tom Bruhns wrote:

> I suppose the "code input" will modulate the input impedance of the
> transistor, and especially the input capacitance, causing a slight
> frequency shift because of the changing load on the resonator. There
> is presumably some amplitude change as well, though I would expect not
> very much; and your comment about a PLL receiver indicates that you
> are detecting the frequency modulation, not any incidental amplitude
> modulation. And I suppose the resonator must be a SAW (surface
> acoustic wave) resonator: 400MHz is a bit high for a standard quartz
> crystal unit. The transistor, of course, is acting as an
> oscillator/amplifier, its collector output coupled to the antenna.
>
> Cheers,
> Tom
>

So what he's got here is a (fairly) standard crystal controlled oscilator that has its frequecy modulated by the incomeing code? I'm assuming that the code is binary and therefor this circuit would act much like an FSK transmitter. I think.

Rick KC0GIX

>
> Tom Roelandt wrote:
> >
> > Hi,
> >
> > I'm a belgian student electronics and we have to make a wireless modem. We
> > use a PLL as receiver and a module, with the following scheme, as
> > transmitter. Does anybody knows how this circuit works?
> >
> > Thanks a lot,
> >
> > Tom Roelandt
> >
> > [Image]

3740. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Your Name <AMDX@worldnet.att.net>
Message-ID: <GKXR4.56434$WF.3123375@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60832

I don't have a direct answer, but how about stacking toroids or pot cores
to get the diameter and length you want? Maybe fill the hole in the toroids
with rods. Use ferrite glue to put them together.
I've been told that rods have an air gap from end to end, so why would
a gap in the middle make any difference? I don't know, what do you think?

--
Mike Knowlton
Panama City Fl.

Wilbur <nospm@home.com> wrote in message news:3917F5F0.1B7@home.com...
> Anyone know why useable ferrite rods can't be homebrewed---anyone have
> experience making their own?

3741. Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Reg <reg@lakeside0.free-online.co.uk>
Message-ID: <pQXR4.811$J5.41192@stones>
Source record: 60833
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Hi Group,

could anyone help me with getting my CB Type PSU going.

I have traced the fault to an IC (MC1723CP) but can't find any
replacement :(

Any help please

Cheers
Reg

3742. Re: looking for SSB40M transceivers shematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Dan Reynolds <bcdlr13@home.com>
Message-ID: <PkYR4.53584$fF5.1669667@news1.rdc1.il.home.com>
Source record: 60834

Eamon, I couldn't get that link to work and would like to see the circuit.
I have a few junk CBs laying around.
Dan
KB9JLO
"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
news:maiQ4.10185$sB3.6888@news.indigo.ie...
> >HELLO,
> >I am a french OM (F4 AER)
> >as a am working on "the best design" for a cheap but
> >efficient SSB transceiver,As it is better to improve than to discover
> >things existings, I am looking for every schematics
> >concerning: SSB; IF amplifiers; ladder quartz filter for SSB,
> >using common components like NE612, MC1350P, PIC 16F84.
> >PA from 5 to 50 W using cheap transistors; SSB KITS descriptions,
> >synthetiseur PLL or DDS with PIC for exemple.
> >
> >I am sending IRC's to cover the cost of your copy and postage
> >if you cant send me file or links
> >
> >Many thanks,
> >
> >Laurent
>
> Have a look at my new four band SSB transceiver. The design is
> very simple. I use a 7.8MHz crystal filter, from a scrap CB.
> All transmitter stages are run in class A, for improved linearity.
>
> http://www.qsl.net/ei9gq/index.html

3743. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Mike Behnke <behnke@fnal.gov>
Message-ID: <39185BEB.1E11DC36@fnal.gov>
Source record: 60835
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Try here.

http://www.rldrake.com/tech/parts/partshtml/partslist.html

Reg wrote:
>
> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg

--

3744. Build: Inductance Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: slug@aeminium.dhis.dee.uc.pt
Message-ID: <8f9nmjvmv1@bbs.aeminium.pt>
Source record: 60836

Hello,
i would like to build a digital inductance meter, which could measure
with reasonable precision. The range would be 1nH to about 1mH and i was
thinking on a schematic like this

coil -> oscillator -> "frequency meter" , PIC -> 7seg Display

I saw a project similar to this one on Elektor Electronics but which uses
a PC to make the measure and display of values.
What do you think about this? And using a bridge to make the measure?
I don't have access to "those old QST numbers" :), so IDEAS instead of pointing
me to those are very welcome :)

73,
Nuno Sucena
--
http://alumni.dee.uc.pt/~slug
CT1FOX

3745. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Larry Shorthill <rfssi-shorthill@mindspring.com>
Message-ID: <8f9o5irva1@nntp9.atl.mindspring.net>
Source record: 60837
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Reg,

It's a very common voltage regulator. It's been around for a long long
time. Motorola part number given, but almost every analog company out there
made or makes a variant of it.

Larry

Reg <reg@lakeside0.free-online.co.uk> wrote in message
news:pQXR4.811$J5.41192@stones...
> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg
>
>

3746. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <ZxZR4.28$CH5.5265@bos-service2.ext.raytheon.com>
Source record: 60838
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

In article <pQXR4.811$J5.41192@stones>, reg@lakeside0.free-online.co.uk says...
>
>I have traced the fault to an IC (MC1723CP) but can't find any
>replacement :(

Reg,

Your "mystery part" is a common 723 voltage regulator IC.
Most any parts house (including Radio Shack) should have
one. MC1723CP is a Motorola number for the generic part.

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

3747. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: "Charles H. Reichert" <qa2696@email.mot.com>
Message-ID: <39185FA8.70A7647B@email.mot.com>
Source record: 60839
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

If I remember correctly this is an adjustable
voltage regulator chip.

See:

http://onsemi.com/pub/prod/0,1824,products1_ProdSum_Base=MC1723C,00.html

for more info. This is still a viable part. Try Digi-Key, they usually
have a good
selection.

Chuck KD9JQ
http://www.mbn.net/kd9jq/hamradio

Reg wrote:

> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg

3748. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Peter Bennett <peterbb@interchange.ubc.ca>
Message-ID: <qnpghs0otr1uf33tpkjsmr8m6scf5sqlq7@4ax.com>
Source record: 60840
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

On Tue, 9 May 2000 18:25:06 +0100, "Reg"
<reg@lakeside0.free-online.co.uk> wrote:

>Hi Group,
>
>could anyone help me with getting my CB Type PSU going.
>
>I have traced the fault to an IC (MC1723CP) but can't find any
>replacement :(

Look for LM723, or even just 723, instead (or as well).

This is a very common voltage regulator made by many companies - and
each company sticks their own prefix and suffix on the base part
number.

--
Peter Bennett VE7CEI
GPS and NMEA info and programs: http://vancouver-webpages.com/peter/index.html
Newsgroup new user info: http://vancouver-webpages.com/nnq

3749. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <39186F0A.15EAB6CE@agilent.com>
Source record: 60841
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

A little more specifically, look for LM723 or other "723" voltage
regulators, preferably in the same package as what's in your PSU...but
if you can't get the same package, don't despair. If you get the pin
assignments for both package types, you should be able to match up the
pins properly and arrange some sort of mechanical kludge.

Cheers,
Tom

Larry Shorthill wrote:
>
> Reg,
>
> It's a very common voltage regulator. It's been around for a long long
> time. Motorola part number given, but almost every analog company out there
> made or makes a variant of it.
>
> Larry
>
> Reg <reg@lakeside0.free-online.co.uk> wrote in message
> news:pQXR4.811$J5.41192@stones...
> > Hi Group,
> >
> > could anyone help me with getting my CB Type PSU going.
> >
> > I have traced the fault to an IC (MC1723CP) but can't find any
> > replacement :(
> >
> > Any help please
> >
> > Cheers
> > Reg
> >
> >

3750. Re: Learning how to troubleshoot

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: w7wjm@arrl.nospam.net
Message-ID: <8f9s2v$f39$1@news.netmar.com>
Source record: 60842

Radio Shack sells a book on using a VOM for about $6.00

In a previous article, "Cal Kutemeier" <ckuter@ix.netcom.com> writes:
>Is there an on-line resource or books to help someone learn how to use a
>digital multimeter - voltage, resistance, capacitance. Something like where
>to place the probes (one side grounded or not) with power on / off.
>
>I am getting involved in QRP and would like to know how to check out my
>rigs.
>
>Thanks
>
>Cal
>
>

----- Posted via NewsOne.Net: Free Usenet News via the Web -----
----- http://newsone.net/ -- Discussions on every subject. -----
NewsOne.Net prohibits users from posting spam. If this or other posts
made through NewsOne.Net violate posting guidelines, email abuse@newsone.net

3751. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Reg <reg@lakeside0.free-online.co.uk>
Message-ID: <kD_R4.1088$16.40559@wards>
Source record: 60843
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Many thanks for all the information.
I should be able to get it going again
I think :)

73
Cheers

Reg

3752. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-09 00:00:00 UTC
From: Reg <reg@lakeside0.free-online.co.uk>
Message-ID: <jD_R4.1087$16.40559@wards>
Source record: 60844
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Lots of thanks for all the response I got on this one.

I'll have that PSU up and running by the weekend :)

73

Reg

3753. Re: New Resource For Investors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: k3bu@aol.com
Message-ID: <20000509210047.09326.00001843@ng-fq1.aol.com>
Source record: 60758

Get the hell out of radio groups you jerk spamer!

3754. Pls explain -- eliminating hum in speech amp?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: JGinNY <jwg6@cornell.edu>
Message-ID: <3918B94F.A9DE02AA@cornell.edu>
Source record: 60759
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

An old ARRL Hints & Kinks book includes a tip on getting rid of speech-amp hum.

Basically, it involves putting a 10 to 12 volt + bias on the filament circuit. The bias voltage is obtained by connecting 2 series resistors (as a voltage divider) between the plate supply and ground. This low + bias is tapped off the voltage divider at the juction of the 2 resistors, and then goes to the filament supply for the speech amp.

The article advises that this will do away with the hum, *but that the filament(s) must not be grounded on one side. (Neither should the center tap of the filament winding be grounded.)

Question is:
If this +10-12 volt bias is placed on the filament supply, how does that reduce or eliminate hum in a speech amp?
The wave shape of the AC component on the filament remains the same, does it not? It's just being bumped up by +10 volts throughout its cycle. How would that alone be effective in getting rid of hum?

And -- isn't one side of a rig's filament supply grounded, typically? How, then, could one successfully apply the aforementioned scheme?

Finally, one other point: The article recommends using a "filament bias" value of +10-12 volts, as mentioned above. However, it doesn't specify whether this is intended for 6.3 or 12 volt filaments. Would it matter? Would the same value of bias work for either?

many thanks,
N1AEP

3755. Re: How does this circuit works??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fafbh$2pn$1@neptunium.btinternet.com>
Source record: 60760

Who says its a frequency shift keying circuit. A few millivolts
change in DC input will shift frequency but will also change
amplitude.

The circuit is much more likely to be an on-off, mark-space keyer
where a bit of chirp doesn't matter. The keying input signal could
then be several volts to turn the transistor fully on or fully off
with everything under well-defined control.
--
Regards, Reg.
http://www.btinternet.com/~g4fgq.regp
==========
Tom Bruhns <tom_bruhns@agilent.com> wrote in message
news:39187047.86E9A1D2@agilent.com...
> Yep, that's the way I see it. I'd be really reluctant to try to put
> something like that into production because the freq shift isn't
very
> well controlled, but for hobby/learning applications it's probably
> fine. If you did it with, say, a 50MHz crystal, I'd expect it would
> shift on the order of 1kHz or less. You can get a lot larger shift
> using a varicap diode.
>
> Cheers,
> Tom
>
>
> Rick Haub wrote:
>
> > So what he's got here is a (fairly) standard crystal controlled
oscilator that
> > has its frequecy modulated by the incomeing code? I'm assuming
that the code is
> > binary and therefor this circuit would act much like an FSK
transmitter. I
> > think.
> >
> > Rick KC0GIX
> >
> > >
> > > Tom Roelandt wrote:
> > > >
> > > > Hi,
> > > >
> > > > I'm a belgian student electronics and we have to make a

wireless modem. We
> > > > use a PLL as receiver and a module, with the following scheme,
as
> > > > transmitter. Does anybody knows how this circuit works?
> > > >
> > > > Thanks a lot,
> > > >
> > > > Tom Roelandt
> > > >
> > > > [Image]

3756. Re: Question: Cascading bi-stable latching relays??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <3918E094.11299770@nettally.com>
Source record: 60761
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew,rec.radio.amateur.antenna,sci.electronics.equipment

Sounds good. Then I can make the last contact prepare a ganged reset for all the relays. Looks pretty good so far. I will need to work out the pulse width to keep from triggering the next relay prematurely. Probably a 555 timer will do.

"Charles W. Shults III" wrote:

> Hi, Joe.
> You are applying a pulse each time you switch, correct? So, each relay can
> close a circuit when it is latched on, also correct? Why not make this the
> path to energize the next relay? That path will vanish once the relay switches
> and then the -next- relay will be the only one that can switch...
>
> Cheers!
>
> Chip Shults
>
> SPAM free Email - aichip@gdi.udu.net but remove the .baryon
>
> PGP \\ 8B27 CFD5 AAD5 67EA BF00
> Key // 7529 9CF6 C3D7 233C D4D9

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come at you rapidly.

3757. Homebrew GPS RX Design ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8fb6al$5nt$1@lola.ctv.es>
Source record: 60762

Are there any homebrew GPS designs on the internet, I fancy building a GPS receiver. If you know of any sites please let me know the URL etc.....

73 de Colin

3758. Re: QRP AMP 30 with a LARGE SWR

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: n2cqr@erols.com
Message-ID: <3919673f.87234191@news.erols.com>
Source record: 60763

Curtis: I think you may be on the right track, but I suspect that the amp is generating some form of VHF parasitic signal. There is a very simple way to see if this is the problem: Get a purely resistive dummy load and check the SWR with this. If the amp is generating parasitics, you are getting a high SWR reading becasue the SWR is high at the parasitic frequencies. But with a purely resistive load, the SWR should be the same at all frequencies. If you get high SWR with the antenna and a low SWR with the resistive load, I think the parasitic diagnosis is strengthened. Good luck. Let us know what happens 73 Bill N2CQR

On Tue, 9 May 2000 10:38:57 -0400, "Curtis Scholl" <cscholl@izzy.net> wrote:

>Hello
>
> I own a Ramsey QRP 30 CW transmitter. It can produce about 1 watt of
>power. I have it driving a Ramsey QRP AMP 30. This is tied into my MFJ
>Transmatch/SWR Bridge.
>
> When I connect the Transmitter directly to the transmatch, I can adjust
>the minimal reflected power down.
>
> When I connect the transmitter through the linear with the linear direct
>to the transmatch, I can not get the reflected power adjusted out. The SWR
>reads at 5:1. I can adjust out some but it is still at 3:1.
>
> My antenna is a multiband dipole cut for 10.108, 14.060, 21.150 and
>28.200. There is a balun at the apex of the inverted "V". The balun is rated
>for more power than my Heathkit can produce.
>
>Why is it that the linear is affecting the reflected power so much?
>
>I have a theory. The linear uses 2 FETs in a class C (? on type), one fet
>for the positive going pulse and one fet for the negative going pulse in a
>wideband transformer arrangement. If one of the FETs fails, could it cause a
>clipping of the signal at the neutral point thus producing peaks at 1/2 the
>fundamental and therefore causing a high SWR due to the lower frequency?
>
>Has the Balun gone bad? I would hope not as the transmitter has no problem
>with high SWR.
>
>I have gone over all the connections with a fine tooth and on the
>questionable ones I backed the solder up with a piece of copper wire to
>insure the trace conductivity.

>
>Thanks in advance for your help.
>
>Curtis SCholl
>cscholl@izzy.net
>
>KG8SU
>
>
>

3759. Re: Homebrew GPS RX Design ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <1ubS4.14506$X91.71285@news02>
Source record: 60764

You probably need to take a look at the chip set manufacturers web sites. At this point the GPS receiver building process more or less consists of putting an RF chip together with an IF chip. A variety of people make some of each. Analog Devices, Sony, and Motorola all come to mind.

Hope this helps

Bob

"Colin Lowe" <colinlowe@jet.es> wrote in message news:8fb6al$5nt$1@lola.ctv.es...
> Are there any homebrew GPS designs on the internet, I fancy building a GPS
> receiver. If you know of any sites please let me know the URL etc.....
>
> 73 de Colin
>
>

3760. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: bw201@torfree.net
Message-ID: <FuCFqM.GwG.0.queen@torfree.net>
Source record: 60765

Wilbur (nospm@home.com) wrote:
: Anyone know why useable ferrite rods can't be homebrewed---anyone have
: experience making their own?

: I'd like experiment with rods .75" in diameter and 12" long or longer
: for VLF/HF but I sure don't want to pay the big money asked for
: them---some rods go for $100! I've heard of lab bench work where
: ferrite powder is mixed with epoxy then poured into molds. Although I
: haven't priced powder I suspect it's a small percentage of cost in the
: finished component.

I have been trying to get a friend to update my parts accumulated over
28 years for sale web site.

Here are two of the items I wanted to add:

6 - Ferrite Rods 0.4" dia. x 5.5" long Yellow code ferrite A2G ui=300,
for 0.4-2.0MHz use; tan~d/ui 150C; Ohm-cm = 1 x 10^7;
$2.50 U.S. funds each

6 - Ferrite Rods 0.4" dia. x 5.5" long Blue code ferrite A5N ui=100,
for 0.4-20.0MHz use; tan~d/ui 300C; Ohm-cm = 1 x 10^4;
$2.50 U.S. funds each

These are the longest ferrite rods I have that I am willing to part with.

3761. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Gary Tait <tait@primeline.net>
Message-ID: <3919657E.C496088@primeline.net>
Source record: 60766
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Any PS chip with 723 will work. Even RS stocks one.

Reg wrote:
>
> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg

--
Gary Tait,VE3VBF Homepage: http://www.primeline.net/~tait ICQ 43425545
*** Do not Email back me newsgroup responses, just post them. ****
Email sent, if replied, will be replied with the provided address,
as is, if it comes back undeilvered,it will be deleted.

3762. Re: 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <3919735C.3040098A@rsg.org>
Source record: 60767

Oh, one of those! Yes I remember using a surplus
5W UHF NPN Ceramic bolt-on RF device back in
the 70's but don't recall the part number now. These
had solderable short leads.

Looks like the 2N6367 could work
as a driver or final stage thru 30Mhz.

73 Chuck KD9JQ

Eamon Skelton wrote:

> >Eamon,
> >
> >Is this a correct part number? What case style?
> >I've looked thru all my Moto sources here at
> >work and still can't find it in the retired list.
> >
> > Chuck KD9JQ
>
> Hello Chuck,
>
> It's a ceramic, bolt on thingy. A kind gentleman
> in VE6 land sent me the following info:
>
> 2N6367
>
> 20w
> 2a
> ft=50 MHz
> hfe 28 typ
> ce=18 vdc
> cb =36 vdc
>
> Thanks to all who replied.
>
> 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://www.qsl.net/ei9gq

3763. What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: jhoyos@hoth.gcn.ou.EDU
Message-ID: <20000510152619984.AAA234.268@DEP_FISICA.ucaldas.edu.co>
Source record: 60768

Hi Listers:

Do the Nuvistor tubes have special characteristics?

Where does that name come from?

Thanks in advance.

Jorge Hoyos
HK 6 BCC

3764. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <WUfS4.14644$701.227414@news4.giganews.com>
Source record: 60769

Nothing special about a Nuvistor except its size. They are very tiny in an attempt to compete with transistors. RCA created the name, and at the same time, marketed their television receivers with the slogan New Vista.

They do require special sockets.

73, Bob K6DDX

3765. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Michael Black <blackm00@Gloria.CAM.ORG>
Message-ID: <Pine.LNX.4.10.10005101238350.7700-100000@Gloria.CAM.ORG>
Source record: 60770

On Wed, 10 May 2000, Bob wrote:

> Nothing special about a Nuvistor except its size. They are very tiny in an
> attempt to compete with transistors. RCA created the name, and at the same
> time, marketed their television receivers with the slogan New Vista.
>
> They do require special sockets.
>
> 73, Bob K6DDX
>

I've never seen a good history of the Nuvistor. But I'm not sure miniaturization was the primary focus. Remember, there were sub-miniature tubes available at the time the Nuvistors hit the market, and those sub-minis were used in plenty of portable equipment (such as hearing aids, portable radios, and those lunchbox style walkie talkies that Motorola once made) whereas I can't think of something a Nuvistor was used in to provide primarily miniaturization.

Nuvistors were introduced at a time when transistors were not all that great at RF, so I'm not sure the "compete with transistors" theory works.

Certainly in Ham circles, the Nuvistor was used because it had low noise figure, good for VHF reception. When they were introduced, the only thing better, paramps and tubes like the 416, were far more expensive and finicky to use. Nuvistors beat out any common tube used in VHF front ends at the time. And this held true until good transistors and FETs arrived on the scene.

And while I've never seen one, I understand that Nuvistors showed up in some TV front ends, again presumably for the low noise figure.

The miniaturization of the tube might have provided the Nuvistor with certain performance increases, but my RCA Receiving Tube Handbook barely mentions the Nuvistor.

Michael VE2BVW

3766. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <h97jhs8m75o5398363p8g9nsk9fg9tbu5q@4ax.com>
Source record: 60771

On 10 May 00 15:25:39 GMT, jhoyos@hoth.gcn.ou.EDU wrote:

>Do the Nuvistor tubes have special characteristics?

Yeah. They're small. This leads to a few useful features. First, you don't need as much heat to fling electrons off the anode. That means they'll have a lower noise figure than most larger tubes. Second, their small size can help by presenting less reactance (of both kinds). This made them easier to work with at VHF frequencies.

Yes, I have seen them. They were commonly found on the front end of early high end television and FM stereo tuners.

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

3767. Re: Antenna technology breakthrough

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <3919A101.2B72F706@clifto.com>
Source record: 60772

Carl Clawson wrote:
> http://www.patents.ibm.com/details?&pn=US06025810__&s_bsum=1#bsum
>
> Oh, and it also causes "accelerated plant growth." Must be the lamp.
> Carl WS7L

There once was a day when one could look at a goofy story like this patent
and assure himself that someone had actually seen this work. How sad.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

3768. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Jim Garver <k7yo@crpud.net>
Message-ID: <3919B021.E6E7F5FB@crpud.net>
Source record: 60773

Michael Black wrote:
> And while I've never seen one, I understand that Nuvistors showed up
> in some TV front ends, again presumably for the low noise figure.

I found one in a TV tuner, which is fortunate because the Clegg Venus that
I bought at a swapmeet had some kinda FET stuck in the Nuvistor socket.
The Nuvistor is small for the obvious reason of reduced element geometry,
hence lower inter-electrode capacitances and such. Great for VHF and up.
VHF noise figure is below 3db, I think.
Too bad my TV-10D/U doesn't have a socket to test it with.
Look up 6CW4 for VHF and most common, 6DV4 for UHF.

Jim K7YO

3769. Re: How does this circuit works??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3919A8A0.3CB65FBB@agilent.com>
Source record: 60774

Reg Edwards wrote:
>
> Who says its a frequency shift keying circuit. A few millivolts
> change in DC input will shift frequency but will also change
> amplitude.
>
> The circuit is much more likely to be an on-off, mark-space keyer
> where a bit of chirp doesn't matter. The keying input signal could
> then be several volts to turn the transistor fully on or fully off
> with everything under well-defined control.

Yep, I jumped to the conclusing that the PLL receiver was looking for FSK, without looking very closely: clearly when the input is at 0, the oscillator is off. If the input were between, say, 2V and 3V, the FSK would make sense, but unless we know otherwise, a 0-5V cmos input level would be a reasonable assumption, and that's clearly on-off keying.

Cheers,
Tom

3770. Re: looking for SSB40M transceivers shematics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <B9iS4.12175$sB3.7563@news.indigo.ie>
Source record: 60775

>Eamon, I couldn't get that link to work and would like to see the circuit.
>I have a few junk CBs laying around.
>Dan
>KB9JLO

EI9GQ homebrew radio page is now mirrored at:

http://homepage.eircom.net/~ei9gq

73, Ed.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://homepage.eircom.net/~ei9gq

3771. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <MuiS4.33580$r37.387778@news20.bellglobal.com>
Source record: 60776

jhoyos@hoth.gcn.ou.EDU wrote in message
<20000510152619984.AAA234.268@DEP_FISICA.ucaldas.edu.co>...
>Hi Listers:
>
>Do the Nuvistor tubes have special characteristics?
>
>Where does that name come from?
>
>Thanks in advance.

>Jorge Hoyos
>HK 6 BCC

Jorge,

Nuvistor is a small (1 cm diameter) triode vacuum tube from the 1960s. Used in many VHF amplifier circuits, 2-meter converters etc.

3772. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fc8vpjpn1@neptunium.btinternet.com>
Source record: 60777

I recollect miniature nuvistors had characteristics of mu, gm and Rp
similar to full size radio receiving tubes except that they were
capable of working with 12 or 13 volt DC plate supply voltages just
the same as the cathode heater supply volts.

Fine for 1950 car radios when germanium transistors were very poor
ampifiers at RF. The better RF efficiency of silicon junction
transistors very soon dominated the market. Nuvistors were very good
in their day, but their day was short. A sad story ?
--
Regards, Reg.
==========================
Free radio design software from :-
http://www.btinternet.com/~g4fgq.regp
==========================
Michael Black <blackm00@Gloria.CAM.ORG> wrote in message
news:Pine.LNX.4.10.10005101238350.7700-100000@Gloria.CAM.ORG...
>
>
> On Wed, 10 May 2000, Bob wrote:
>
> > Nothing special about a Nuvistor except its size. They are very
tiny in an
> > attempt to compete with transistors. RCA created the name, and at
the same
> > time, marketed their television receivers with the slogan New
Vista.
> >
> > They do require special sockets.
> >
> > 73, Bob K6DDX
> >
> I've never seen a good history of the Nuvistor. But I'm not sure
> miniaturization was the primary focus. Remember, there were
sub-miniature
> tubes available at the time the Nuvistors hit the market, and those
> sub-minis were used in plenty of portable equipment (such as hearing
> aids, portable radios, and those lunchbox style walkie talkies that
> Motorola once made) whereas I can't think of something a Nuvistor
was used
> in to provide primarily miniaturization.
>
> Nuvistors were introduced at a time when transistors were not all
that

> great at RF, so I'm not sure the "compete with transistors" theory
works.
>
> Certainly in Ham circles, the Nuvistor was used because it had low
noise
> figure, good for VHF reception. When they were introduced, the only
> thing better, paramps and tubes like the 416, were far more
expensive and
> finicky to use. Nuvistors beat out any common tube used in VHF
> front ends at the time. And this held true until good transistors
and
> FETs arrived on the scene.
>
> And while I've never seen one, I understand that Nuvistors showed up
> in some TV front ends, again presumably for the low noise figure.
>
> The miniaturization of the tube might have provided the Nuvistor
with
> certain performance increases, but my RCA Receiving Tube Handbook
> barely mentions the Nuvistor.
>
> Michael VE2BVW
>
>

3773. i'D LIKE TO BUILD A SIMPLE POWER AMP FOR MY HF RIG

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Billy Young <youngbil@lcc.net>
Message-ID: <8fccme$hm0@atlas.lcc.net>
Source record: 60778

HELLO,
DOES ANY HAVE PLANS ON HOW TO BUILD A SIMPLE POWER AMP FOR MY HF RIG? I
DON'T WANT TO BUY ONE BUT I'D LIKE TO TRY AN BUILD ONE.

THANKS
BILLY YOUNG
KD5CSD

3774. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <3919BA16.2EFB0D4D@valley.net>
Source record: 60779
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Reg wrote:

> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(

Hello--
Look for a uA723 or an LM723, or check the EGC cross-reference guide.
This should be a common IC and possily available at Radio hack. The
prefix (MC, LM, uA) indicates the manufacturer and the CP suffix
probably
indicates that the version you have is a consumer-temperature-range (C)
plastic DIP (P) version. You can use a ceramic DIp in place of a plastic

if that's all that's available.

If you can't locate one locally, I can help via mail order.

73,
Brad AA1IP

3775. Components URL's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: "Radio K\"" <swonbat@caltec.edu>
Message-ID: <FhjS4.45460$x4.1535982@newsread1.prod.itd.earthlink.net>
Source record: 60780
Cross-posted to: rec.radio.amateur.antenna,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Selected URL's for electronic components

AMP: www.amp.com

AMPHENOL: www.amphenol.com

Beau: www.beauint.com

Buss Fuses: www.bussman.com

Electroniocs Products Mag: www.electronicproducts.com

FCC ID Certification: www.fcc.gov/oet/fccid/

Linear Devices: www.linear-tech.com

Motorola: www.mot-sps.com

National Semi: www.national.com

Phillips: www.us.semiconductors.phillips.com

...and finally

Bastard Dipsh-t Ham Dealers Homepage: www.amishrakefight.com/gfy/

(send that last one to those Dipsh-t Hamfest Dealers who think they
know everything and sell products that suck and/or don't work and
have suckas- customer service....we all know adleast one...)

astard

3776. Re: Homebrew GPS RX Design ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <8fcodk$5r6$1@nnrp1.deja.com>
Source record: 60781

In article <8fb6al$5nt$1@lola.ctv.es>,
"Colin Lowe" <colinlowe@jet.es> wrote:
> Are there any homebrew GPS designs on the internet, I fancy building a
GPS
> receiver. If you know of any sites please let me know the URL etc.....

On the web, no. But Matjaz Vidmar S53MV published a combined
GPS/GLONASS receiver in VHF Communications a couple of years ago.

Not for the faint-hearted...

Laura Halliday VA3LDH/7 "Que les nuages soient notre pied
Grid: CN89mg a terre..." - Hospital/Shafte

Sent via Deja.com http://www.deja.com/
Before you buy.

3777. Re: New antenna program MAGLOOP4

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: "Leland C. Scott" <no-spam@junk-mail.net>
Message-ID: <8fcnuj$cmn@nnrp2.farm.idt.net>
Source record: 60782

"Dale Parfitt" <parinc@bellsouth.net> wrote in message
news:3918CA80.2944FF16@bellsouth.net...
> Leland,
> Please give me your E-Mail address.

Sure.

<!< kc8ldo@arrl.net >>

--
73's,

Leland C. Scott
KC8LDO

ARRL member
NCI member

"You ask what Morse Code is good for? I'll tell you. Morse
Code is used exclusively by Electronics Based life forms to
communicate amongst themselves using advanced Organic
Digital Signal Processors, running state of the art Artificial
Intelligence Software, to perform the highly complex
transmit encryption, receive decryption and error correction
functions."

3778. Re: i'D LIKE TO BUILD A SIMPLE POWER AMP FOR MY HF RIG

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: "Stevan A. White" <engineer@kgnc.com>
Message-ID: <3919edcd@news.usenetnews.org>
Source record: 60783

Take a look at the plans in the ARRL Handbook.

<earlve3ab@igs.net> wrote in message news:391a8347.1639297@news.igs.net...
> Its not that difficult but i would have to know a few things..how much
> power does your existing rig put out? I have 3 tech folders in my
> collection on RF transmitting Amps..73 Earl VE3AB
> On Wed, 10 May 2000 14:18:33 -0500, "Billy Young" <youngbil@lcc.net>
> wrote:
>
> >HELLO,
> >DOES ANY HAVE PLANS ON HOW TO BUILD A SIMPLE POWER AMP FOR MY HF RIG? I
> >DON'T WANT TO BUY ONE BUT I'D LIKE TO TRY AN BUILD ONE.
> >
> >THANKS
> >BILLY YOUNG
> >KD5CSD
> >
> >
>

3779. Davis Instruments WeatherLink

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-10 00:00:00 UTC
From: Bob Ratliff <noone@home.net>
Message-ID: <MPG.1383ba364257265c989680@news.mrtc.com>
Source record: 60784
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

I am looking for schematics/plans for the Davis Instruments WeatherLink.
If anyone has any info, it would be greatly appreciated.

Thanks,

Bob Ratliff
KD4MKB
kd4mkb@qsl.net

3780. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Tom <nopam@nospam.com>
Message-ID: <391A8F30.523C@nospam.com>
Source record: 60695

It's what we call, here in the states, an illegal alien---new visitor---but they pronounce it (with a distinct lisp) nuvistor.

3781. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8febe0sdt1@nnrp1.deja.com>
Source record: 60696

In article <3917F5F0.1B7@home.com>,
nospm@home.com wrote:
> Anyone know why useable ferrite rods can't be homebrewed---anyone have
> experience making their own?
>
> I'd like experiment with rods .75" in diameter and 12" long or longer
> for VLF/HF but I sure don't want to pay the big money asked for
> them---some rods go for $100! I've heard of lab bench work where
> ferrite powder is mixed with epoxy then poured into molds. Although I
> haven't priced powder I suspect it's a small percentage of cost in the
> finished component.

Rather than make your own, rods can be glued end to end, and you could
stack several rods together to get something like an effective 0.75"
diameter.It should work just as well as a single large rod.

73, Leon

--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

3782. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <391AAF0C.167EB0E7@my-deja.com>
Source record: 60697

Reg Edwards wrote:
>
> I recollect miniature nuvistors had characteristics of mu, gm and Rp
> similar to full size radio receiving tubes except that they were
> capable of working with 12 or 13 volt DC plate supply voltages just
> the same as the cathode heater supply volts.
>

There may have been some that were designed for low plate voltage
but the most common one, the 6CW4, required a plate voltage of
140-150 Volts. I still have a 2-Meter Converter that uses 2 or
3 of them. The power supply for it provides 6 Volts for the
filaments and 140 Volts for the plate. Last I checked the converter
was still working fine.

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

3783. An Icom IC-706 Tune Trigger for as low as $1.19 (Some assembly required)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: wa2ehz@my-deja.com
Message-ID: <8feifg$4uh$1@nnrp1.deja.com>
Source record: 60698

An Icom IC-706 Tune Trigger for as low as $1.19 (Some assembly
required)

The ICOM IC-706 has a nifty feature built in to help the operator tune
the HF antenna SWR. By pushing the TUNE button on the front panel, the
radio switches to CW mode and transmits a 10 Watt carrier. This state
last for approximately 10 seconds or the operator can terminate sooner
by pushing the button again. This was designed to work with the Icom
automatic antenna tuners.

There have been a few circuits developed to fool the 706 into thinking
there is a Icom tuner attached and produce the same tuning signal which
can be used with a manual antenna tuner or many automatic tuners. One
is available commercially for about $35 and a new circuit appeared on
the Internet recently for home-brew.

Well, being the cheap guy I am, and being one to tinker, I felt there
had to be a simple way to do this. I began reading the various postings
on the Internet. I went back to an e-mail exchange I had with Ed, W1AAZ
in early April 1999 on Vartel's ICOM 706 Discussion Group. Ed explained
the functions of the TKEY and TSTR pins on the "AH-3" connector on the
706.

==========
e-mails:

RIG: ICOM 706 MKII
From: Ed, W1AAZ
Date: 04 Apr 1999
Time: 20:20:35

Every thing you need is available at the AH-3 connector and a couple of
dollars from Radio Shack.

< 0 0 0 0] <---- connector TKEY TSTR 13.8V GND

TSTR must be brought high (tells the IC706 that an antenna tuner is
connected). Pushing the TUNE button then pulses TSTR low which can clock
a flip flop (configured to toggle)that drives the TKEY line low
(transmits a 10W carrier for 20 seconds or terminated sooner by second
push of the TUNE button). You need just a few more parts to provide the
correct clocking level(positive pulse) and to set the flip flop on power
up (so it always
comes on in the correct state).

RIG: Icom 706
From: Ed, W1AAZ

Date: 13 Apr 1999
Time: 08:39:27

Comments

>It sounds like setting the TKEY line low puts >the transmitter into this "tune mode".

No.....pulling TSTR high is what puts the IC706 into "tune mode". Thereafter, bringing TKEY low keys the IC706.

>If this is true, can TKEY be brought low by just >connecting to GND through a push button switch?

Yes...but see above.

>Would it have the same effect?

Yes.....in a limited way (manual tune via an external push button switch).

>If this were to work, can it connect straight to GND or should it have a resistor in series?

No resistor needed in TKEY line.

==========
I got an idea, went about experimenting and was pleasantly surprised. I played around for about 2 hours to find component values I wanted and trying to make the system not work. It worked fine. It was simple, too simple. I could not sleep that night. I was kicking myself for not trying this a year sooner, remembering all those times driving the RV switching to AM, reducing the power, keying the PTT, tuning the antenna tuner, then resetting it all for SSB and keeping between the lines at 55 MPH.

Then, the next "natural" thought came to mind: "SELL IT". "For $3.00 worth of parts, I could under sell the competition by $10.00 and still make $20.00 per piece for a half-hour's work. But this design was too simple, what if some one opens the case and looks inside, boy would they feel ripped-off." I finally had to wake the wife so she could share in my sleeplessness. I told her my idea. She asked about patens. Then I thought "What if this is what is in the commercial unit? I would be violating his paten if I sell it. What would it cost to research? What about product liability?" At that point I decided to drop the marketing plan, besides how many customers could there be? Do I want to spend my summer evenings building, packaging and shipping?

A half-hour later I decided to go downstairs for milk and cookies and turned on the TV. There, just when I turned the TV on, was a commercial seeking inventions. I had to chuckle, my mind was made up. I am not into ham radio to make money. What if all discoveries were released only for profit, where would the hobby be? The hobby is supposed to be to share knowledge for further advancement. No, this is not going to

change the hobby the way PSK-31 from a PC sound card will, but it's the principle. Yes, there are lots of people in the publications and on the Net selling their wares, and that's great. I even had just ordered an add-on card to allow repeater splits to be programmed in the 706 (something Icom forgot in the first model). But this thing is too simple.

In order to assure nobody else makes money off of this, I have decided to post my findings on all of the news groups I can think of and e-mail various publications for printing if they choose. Of course, I assume no responsibility for any damage or consequences and there is no warranty. If you think this is worth while, enjoy. If you find a problem with the design, let me know and I will distribute to the same list that message uses. If you disagree with my opinions, that's your right, but I will not debate.

Well that was the price you had to pay for my 2 hours of experimentation, I got to be on my soap box. Like I said, this is simple. You can buy the Molex connector at Radio Shack (#274-0224) and any "Real Ham" will have the rest of the parts lying around on the floor. Use proper construction techniques, assure you have no shorts. How you want to package it is up to you. Use the above diagram of the connector as a reference. Connect TKEY to TSTR. Connect the negative (-) side of an electrolytic capacitor C and one side of resistor R to this connection. The positive (+) of C and the other side of R circuit is connected to +13.8V. That's all there is, a simple RC circuit between the TSTR/TKEY junction ant +13.8V!

Turn off the 706 and plug in the unit. Make sure you have some sort of load on the HF antenna connector. Turn on the 706, the radio sees TSTR is high during boot up and thinks there is a tuner connected. Push the TUNE button. The TUNE light should flash counting the seconds. Yes, you may interrupt the cycle by pressing TUNE again.

What is R and C? Well the higher the values, the longer the 706 stays in TUNE mode. The highest the R value I was able to use and still have the 706 think there is a tuner was 3.3 M-Ohms. I use a 1000 uF 16WV to get about 20 seconds of TUNE time, 440uF gives about 10 seconds. The values are not critical, but there are limits, so feel free to play using parts you have.

Two problems I found which I don't feel are "biggies": 1) If the 706 is allowed to finish the cycle, the TUNE light stays on - sometimes. This can be turn off if you hit the TUNE button soon after it finishes. If you wait too long, it will start a new cycle. 2) If you terminate the cycle early, to start a new cycle, you need to wait until the capacitor discharges or you can turn off the 706 and back on to reset.

How does it work? It becomes very obvious by re-reading the e-mail exchange above. The capacitor C just holds TKEY low while C discharges through R. In fact, if so desired, one can drive TKEY low externally to hold the TUNE state. This opens all kinds of possibilities for

automatic tuners that can sense the SWR. Low is below 2V according to my meter. Watching an analog voltmeter is very educational in this type of project. This is where you learn that if the cycle is terminated early by pushing the TUNE button, you cannot start a new cycle until TKEY is above 2.5V.

Thanks to Ed, W1AAZ for the explanation of the connector
If you have any comments, I'd love to hear them. Enjoy!
73 de Larry Lefczik, WA2EHZ
WA2EHZ@juno.com

Sent via Deja.com http://www.deja.com/
Before you buy.

3784. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <TqiHBdAuNrG5Ew9t@ifwtech.demon.co.uk>
Source record: 60699

N2EY wrote:
>In article <8fc8vpjpn1@neptunium.btinternet.com>, "Reg Edwards"
><G4fgq.Regp@btinternet.com> writes:
>
>>I recollect miniature nuvistors had characteristics of mu, gm and Rp
>>similar to full size radio receiving tubes except that they were
>>capable of working with 12 or 13 volt DC plate supply voltages just
>>the same as the cathode heater supply volts.
>
>Not really, Reg. You're confusing the special tubes made for that service in
>the '50s with the tiny Nuvistors of the 1960s.

RCA made Nuvistors for both 12/24V and more conventional 100-200V anode
voltages.

>>Fine for 1950 car radios when germanium transistors were very poor
>>ampifiers at RF. The better RF efficiency of silicon junction
>>transistors very soon dominated the market.
>
>True - but Nuvistors appeared after that was all settled. They lasted into the
>late 1960s - early 1970s. They are much smaller than miniatures.
>
Really, I suppose they lasted until high-frequency FETs became
available. Nuvistors were used in the input stages of 'scopes, for many
years after everything else (except for the CRT) was solid-state.
Some of those 'scopes are still running, but if/when the Nuvistors go,
that is the end... unless someone has a secret cache.

One problem with Nuvistors was their short lifetime at higher anode
voltages. The 6CW4s in my VHF converters (remember those?) used to last
about a year - and then died very suddenly. At the time, it wasn't
always possible to tell whether the front-end had died, or it was just a
normal evening on 2m or 4m AM...

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

3785. half wave dipole question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Rick <camelman@casema.net>
Message-ID: <391aef21$0$10069@reader3>
Source record: 60700

Hi guys, my name is Rick.
I wonder if anyone of you could tell how some HF vertical antennas could work without radials system. As an old timer ham (23 years of ham operation), I also built a lot of antennas, including some classic monoband and multiband verticales, but always with a radials, which, I think are acting like some kind of artificial ground. Few years ago, some antennas builders started to offer some kind of antennas (like CUSHCRAFT for exemple..R5, R7...etc..), which doen't have radials. I wonder if they are working in half wave lenght type, or with some matching devices with bring the imperdance to the appropriate value..????????
Please, if you know something about that kind of verticale antennas (without radials), drop me an e-mail......would greatly appreciate it
Regards and 73's to all
Rick

3786. Re: 2N6367 Info?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: ma_locksmith <ma_locksmith@email.msn.com>
Message-ID: <ejhbRe3u$GA.342@cpmsnbbsa04>
Source record: 60701

From the 1979 Motorola Master Selection Guide:

It is listed under the 1.5 to 30 MHz HF/SSB transistors and has the
following characteristics

Power in of 0.36 watts
Power out of 9 watts PEP
14 dB power gain
Vcc of 12.5 volts

They call the case style a 211-07

Ed
K1ZOK
"Eamon Skelton" <Xnospam@oceanfree.net> wrote in message
news:Xl0S4.11593$sB3.7500@news.indigo.ie...
> >Eamon,
> >
> >Is this a correct part number? What case style?
> >I've looked thru all my Moto sources here at
> >work and still can't find it in the retired list.
> >
> > Chuck KD9JQ
>
> Hello Chuck,
>
> It's a ceramic, bolt on thingy. A kind gentleman
> in VE6 land sent me the following info:
>
> 2N6367
>
>
> 20w
> 2a
> ft=50 MHz
> hfe 28 typ
> ce=18 vdc
> cb =36 vdc
>
> Thanks to all who replied.
>
> 73, Ed. EI9GQ.
>
>
>

> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://www.qsl.net/ei9gq
>
>

3787. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: cj <cj_johansson@hp.com>
Message-ID: <391AFDDB.5A84@hp.com>
Source record: 60702

Nick wrote:
>
> I think they were popular in video cameras as well
>

Maybe, but I suspect you're thinking of a nuvicon tube, which is
quite a different animal altogether...

-cj
KD6AEG

3788. Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Will <no@spam.com>
Message-ID: <391B0423.451C@spam.com>
Source record: 60703

What in hell is going on with Amidon???? I already made nearly 20 telephone calls this past week to find out about my overdue order and nobody know from S**T about what is going on---from the receptionist on.

Based upon my experiences the past month I GIVE AMIDON MY LOWEST CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do business with Amidon to seek another supplier and to avoid dealing with them direct.

This company, as represented by their employees, is truly second rate and nowhere near the Amidon I dealt with in the past. WHAT A KOOK OPERATION! Everyone I've talked to has trouble speaking on the telephone and English is NOT their native language.

Consumer beware...

3789. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8ff4v2ubj1@news6.svr.pol.co.uk>
Source record: 60704

They were also used in TEK 45* series scopes.. Robin G3LBA
"cj" <cj_johansson@hp.com> wrote in message news:391AFDDB.5A84@hp.com...
> Nick wrote:
> >
> > I think they were popular in video cameras as well
> >
>
> Maybe, but I suspect you're thinking of a nuvicon tube, which is
> quite a different animal altogether...
>
> -cj
> KD6AEG

3790. 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8ff7bdtuc1@nnrp1.deja.com>
Source record: 60705

I've build a diode ring double balance mixer...50 ohms at each port. I have a Radio Shack Pocket Amplifier that I'm using for audio amplification...5k ohms input. How can I build a xformer to transform the 50ohms to 5k ohms audio???

Thanks!

Bill Harbour
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

3791. Re: Want to build signal generator

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8ff7h1tvl1@nnrp1.deja.com>
Source record: 60706

Rick:

Check out my site http://kd4pwb.homepage.com . I built an RF Sig Gen
and the link for the circuit is on my site. You might be able to mod
it to get you to 30Khz.

Bill Harbour
KD4PWB

In article <39075D0A.59AA8855@midwestmicro-tek.com>,
rhaub@midwestmicro-tek.com wrote:
> Subject pretty much says it all. I would like to build an signal
> generator that goes from about 30kHz to about 10MHz. Can anyone point
me
> to a web site or mag article?
>
> Thanks,
>
> Rick KC0GIX
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3792. 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8ff898uov1@nnrp1.deja.com>
Source record: 60707

Anyone with a link to a 2 meter CW transmitter/transceiver???

Thanks!

Bill Harbour
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

3793. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Wilbur <nospm@home.com>
Message-ID: <391B15A7.61F3@home.com>
Source record: 60708

Leon Heller wrote:
>
> Rather than make your own, rods can be glued end to end, and you could
> stack several rods together to get something like an effective 0.75"
> diameter.It should work just as well as a single large rod.
>
> 73, Leon

That's true, I can do that, but at $20 a pop for a rod it's easy for
costs to topple well past $100.

3794. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: "Geoffrey G. Rochat" <geoff@pkworks.com>
Message-ID: <8fffIr$j5h$1@news.kersur.net>
Source record: 60709

My audiophile friends tell me they also sat in the front-end of
studio-quality ribbon microphones.

Nick wrote in message <1mflhs8micnop2g4mlfiedpq7b383ri4tv@4ax.com>...
>On 10 May 00 15:25:39 GMT, jhoyos@hoth.gcn.ou.EDU wrote:
>
>>
>>
>>Do the Nuvistor tubes have special characteristics?
>
>I think they were popular in video cameras as well
>
>Nick

3795. 2 Yaesu FT 101 ham radios on Ebay

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: SaxJedi <saxjedi@freewwweb.com>
Message-ID: <8fflpk$n0h$1@news.smartworld.net>
Source record: 60710
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

Check out this auction on ebay.

2 Yaesu FT 101 ham radios!!!

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=326175125

3796. Re: i'D LIKE TO BUILD A SIMPLE POWER AMP FOR MY HF RIG

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <391a8347.1639297@news.igs.net>
Source record: 60785

Its not that difficult but i would have to know a few things..how much power does your existing rig put out? I have 3 tech folders in my collection on RF transmitting Amps..73 Earl VE3AB
On Wed, 10 May 2000 14:18:33 -0500, "Billy Young" <youngbil@lcc.net> wrote:

>HELLO,
>DOES ANY HAVE PLANS ON HOW TO BUILD A SIMPLE POWER AMP FOR MY HF RIG? I
>DON'T WANT TO BUY ONE BUT I'D LIKE TO TRY AN BUILD ONE.
>
>THANKS
>BILLY YOUNG
>KD5CSD
>
>

3797. JUNKER/UNFINISHED PWR SUPPLY for tube type xsciever sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <391a83b1.1744792@news.igs.net>
Source record: 60786

DO You have an old hp23 pwr supply or equiv. orhomebrew tt has a
burned out/missing pwer transformer..something that will run a 100w
transciever(hw12) i picked up at a flea market..IM IN ONtario
Canada by the way..Id be interested in recycling it and putting it
to work..I have the transformer but i dont have the time to
scratch build the whole unit.(shiipping w/o xformer would be
much cheaper) Voltage Rqd typical ie 800 v b+ 300 or so
filament windings and minus supply...
73 Earl VE3AB

3798. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Roma <roma60@home.com>
Message-ID: <3919FEFA.459631FB@home.com>
Source record: 60787
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Adjustable voltage regulator . RadioShack still sells them

Reg wrote:
>
> Hi Group,
>
> could anyone help me with getting my CB Type PSU going.
>
> I have traced the fault to an IC (MC1723CP) but can't find any
> replacement :(
>
> Any help please
>
> Cheers
> Reg

3799. Re: Davis Instruments WeatherLink

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: K5WLS@SpamCop.net
Message-ID: <8F30ED9BBK5WLSemailcom@192.168.44.3>
Source record: 60788
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Bob Ratliff <noone@home.net> wrote:

>I am looking for schematics/plans for the Davis Instruments
>WeatherLink. If anyone has any info, it would be greatly
>appreciated.

Meaning that you don't want to buy their equipment, you want to steal
their design and build your own?

I can't help you, but maybe you can get one of these sites to copy the
schematics and send them to you:

http://weathertools.com/dtoolbox.htm
http://www.wxsystems.com/Davisstations.htm
http://www.weathershop.com/davis_wireless.htm
http://www.online-catalog.com/gadgets/wx.html
http://www.poly-electronic.ch/davis-weatherlink.htm
http://www.binary.co.nz/davis.html
http://www.centurytel.net/renfro/Station.htm

3800. Re: i'D LIKE TO BUILD A SIMPLE POWER AMP FOR MY HF RIG

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Brendan K Callahan <god@pcpartner.net>
Message-ID: <8fdgkipvu1@ins21.netins.net>
Source record: 60789

```
-----BEGIN PGP SIGNED MESSAGE-----

I have a QRP (Based on the Little Joe), w/ 1 to 1.5w out for 80m.

Got any plans for a simple 20-40 watt amp for this? Solid state,
preferably, but tubes are OK.

- --
```

*Brendan K Callahan K�EES god@netins.net
*
* Chaos, Panic, Disorder
* (Looks like my work here is done)

```
<earlve3ab@igs.net> wrote in message
news:391a8347.1639297@news.igs.net...
> Its not that difficult but i would have to know a few things..how
> much power does your existing rig put out? I have 3 tech folders in
> my
> collection on RF transmitting Amps..73 Earl VE3AB
> On Wed, 10 May 2000 14:18:33 -0500, "Billy Young"
> <youngbil@lcc.net> wrote:

-----BEGIN PGP SIGNATURE-----
Version: PGPfreeware 6.5.2 for non-commercial use <http://www.pgp.com>

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-----END PGP SIGNATURE-----
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3801. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000511043318.17588.00003653@nso-fk.aol.com>
Source record: 60790

In article <eN%Q4.10427$X91.33727@news02>, "Bob Camp" <bob@cq.nu> writes:

>Good old LM-10 Frequency meters have a very high ratio reduction gear
>driving a capacitor in them. Generaly they are available for $10 or so
>at Hamfests and on eBay. You can make a VERY slow tuning VFO with one
>of them. When I build a reciever based on one it cured me of the need
>to have a slow tuning radio (50 turns to go 10 KHz is just to
>slow.....)

All of the LM series, as well as the BC-221 series, of WW2 frequency meters have excellent capacitors with integral 100:1 gear drives in them. Fifty turns to cover the band or band segment you desire. They are very solid, glass or ceramic insulated, and no backlash. Don't yank plates out - just put a ggod quality fixed capacitor in series and/or tap down on the coil.

I have built two receivers using these caps, and they are simply the sweetest dial going. You need a shaft extension and a nice BIG knob, as well as some sort of dial drum, but that's a piece of cake, really. My current rx has the VFO in a box made of 3/16" aluminum plates, and a dial drum made out of a piece of Plexigals tubing six inches in diameter. Plot lights inside the drum give a nice illuminated dial. The tuning scale is drawn on a piece of mylar sheet that is on the outer side of the dial drum.

Tuning rate is 5 to 6 kHz per knob turn (and the knob is a big solid Bakelite three inch skirted job.)

Also useful are the tuning capacitors in the ARC-5 transmitters. Almost as good as the LM/BC-221 jobs, plus a nice dial.

DON'T tear apart a good freqmeter or ARC-5!!! There are lots of junkers and parts to be had without doing that! Fair Radio had them last time I looked. Ask around!

Warning! If done right, these units will spoil you rotten. You will not be satisfied with the usual dials ever again.

73 de Jim, N2EY

3802. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <20000511043318.17588.00003654@nso-fk.aol.com>
Source record: 60791

In article <8fc8vpjpn1@neptunium.btinternet.com>, "Reg Edwards"
<G4fgq.Regp@btinternet.com> writes:

>I recollect miniature nuvistors had characteristics of mu, gm and Rp
>similar to full size radio receiving tubes except that they were
>capable of working with 12 or 13 volt DC plate supply voltages just
>the same as the cathode heater supply volts.

Not really, Reg. You're confusing the special tubes made for that service in
the '50s with the tiny Nuvistors of the 1960s.

>Fine for 1950 car radios when germanium transistors were very poor
>ampifiers at RF. The better RF efficiency of silicon junction
>transistors very soon dominated the market.

True - but Nuvistors appeared after that was all settled. They lasted into the
late 1960s - early 1970s. They are much smaller than miniatures.

Although most were triodes, a few types were pentodes. There were 2, 6 and 13
volt heater versions of them.

They were the first and probably only tubes to be manufactured using a high
level of automation. They also used no glass - all ceramic-metal.

73 de Jim, N2EY

Nuvistors were very good
>in their day, but their day was short. A sad story ?
>--

3803. Re: Build: Inductance Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <391AB48B.24BA9357@home.com>
Source record: 60792

The april or may issue of Electronics World had an inductance meter design.

Jameco sells a kit for less than $10 for such a meter (attaches to DVM)

RLC bridges - the Heath battery powered units - go for a song on EBay.

slug@aeminium.dhis.dee.uc.pt wrote:

> Hello,
> i would like to build a digital inductance meter, which could measure
> with reasonable precision. The range would be 1nH to about 1mH and i was
> thinking on a schematic like this
>
> coil -> oscillator -> "frequency meter" , PIC -> 7seg Display
>
> I saw a project similar to this one on Elektor Electronics but which uses
> a PC to make the measure and display of values.
> What do you think about this? And using a bridge to make the measure?
> I don't have access to "those old QST numbers" :), so IDEAS instead of pointing
> me to those are very welcome :)
>
> 73,
> Nuno Sucena
> --
> http://alumni.dee.uc.pt/~slug
> CT1FOX

3804. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <391AB4EA.15C5AD1D@home.com>
Source record: 60793

The early versions of theTEK 453 scopes used nuvistors.

Michael Black wrote:

> On Wed, 10 May 2000, Bob wrote:
>
> > Nothing special about a Nuvistor except its size. They are very tiny in an
> > attempt to compete with transistors. RCA created the name, and at the same
> > time, marketed their television receivers with the slogan New Vista.
> >
> > They do require special sockets.
> >
> > 73, Bob K6DDX
> >
> I've never seen a good history of the Nuvistor. But I'm not sure
> miniaturization was the primary focus. Remember, there were sub-miniature
> tubes available at the time the Nuvistors hit the market, and those
> sub-minis were used in plenty of portable equipment (such as hearing
> aids, portable radios, and those lunchbox style walkie talkies that
> Motorola once made) whereas I can't think of something a Nuvistor was used
> in to provide primarily miniaturization.
>
> Nuvistors were introduced at a time when transistors were not all that
> great at RF, so I'm not sure the "compete with transistors" theory works.
>
> Certainly in Ham circles, the Nuvistor was used because it had low noise
> figure, good for VHF reception. When they were introduced, the only
> thing better, paramps and tubes like the 416, were far more expensive and
> finicky to use. Nuvistors beat out any common tube used in VHF
> front ends at the time. And this held true until good transistors and
> FETs arrived on the scene.
>
> And while I've never seen one, I understand that Nuvistors showed up
> in some TV front ends, again presumably for the low noise figure.
>
> The miniaturization of the tube might have provided the Nuvistor with
> certain performance increases, but my RCA Receiving Tube Handbook
> barely mentions the Nuvistor.
>
> Michael VE2BVW

3805. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-11 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fe40h$6do$1@uranium.btinternet.com>
Source record: 60794

Thanks for the corrections Jim. After 50 years the memory plays
little tricks. But was I correct about the low plate voltages used by
nuvistors ?

I assume they didn't arrive on the scene until automated
precision-dimensions manufacuring methods had been developed for use
in other fields.
--
Regards, Reg.
==========
N2EY wrote ..
> "Reg Edwards" writes:
>
> >I recollect miniature nuvistors had characteristics of mu, gm and
Rp
> >similar to full size radio receiving tubes except that they were
> >capable of working with 12 or 13 volt DC plate supply voltages just
> >the same as the cathode heater supply volts.
>
> Not really, Reg. You're confusing the special tubes made for that
service in
> the '50s with the tiny Nuvistors of the 1960s.
>
> >Fine for 1950 car radios when germanium transistors were very poor
> >ampifiers at RF. The better RF efficiency of silicon junction
> >transistors very soon dominated the market.
>
> True - but Nuvistors appeared after that was all settled. They
lasted into the
> late 1960s - early 1970s. They are much smaller than miniatures.
>
> Although most were triodes, a few types were pentodes. There were 2,
6 and 13
> volt heater versions of them.
>
> They were the first and probably only tubes to be manufactured using
a high
> level of automation. They also used no glass - all ceramic-metal.
>
> 73 de Jim, N2EY
>
> Nuvistors were very good
> >in their day, but their day was short. A sad story ?
> >--

>
>

3806. Re: Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: ac6v <ac6v@ix.netcom.com>
Message-ID: <391C7E90.D3D50E73@ix.netcom.com>
Source record: 60645
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

JGinNY wrote:

> What's the difference between cathode and plate current values? Which
> is more useful in properly loading-up an RF tube amp?
>
> Reason for this question is that I have an old Swan tcvr, and the meter
> reads cathode current, not plate current like I have seen on a lot of
> other rigs.
>
> Would that cathode milliammeter be reading the current returning to the
> cathode (or B+ supply?) from the plate (across the load)? Or, would
> read the current _leaving_ the cathode through the tube, towards the
> positive plate?
>
> The older radio handbooks I have don't mention "cathode current," per
> se; only plate current. What's the scoop?
>
> mni tks!
> jg

=========
Cathode current is the sum of plate current, screen grid current, and
control grid current (if any). The screen and grid current values are
fairly low -- check a tube manual for typical values. So cathode current is
essentually plate current. Perhaps Swan decided to get the meter away from
the high plate voltage and get it in a low voltage circuit -- just a guess.

The cathode meter measures total tube current, plate, screen and control
grid if the control grid is positive and draws current.
--
73 from Rod in Oceanside, Ca
==========
AC6V INDEX TO DX AND HAM RADIO
FEATURING 100+ PAGES, 700 INDEXED TOPICS, AND 3000 LINKS
Over 580,000 Visits On The Counter
http://www.ac6v.com - General Ham Pages
http://www.ac6v.com/pagedx.html - DX Reference Pages

3807. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <391C80F1.AD2928D9@mwci.net>
Source record: 60646

Donaly wrote:

> Will wrote:
> >
> > What in hell is going on with Amidon???? I already made nearly 20
> > telephone calls this past week to find out about my overdue order and
> > nobody know from S**T about what is going on---from the receptionist
> > on.
> >
> > Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> > CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> > business with Amidon to seek another supplier and to avoid dealing with
> > them direct.
> >
> > This company, as represented by their employees, is truly second rate
> > and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> > OPERATION! Everyone I've talked to has trouble speaking on the
> > telephone and English is NOT their native language.
> >
> > Consumer beware...
>
> I haven't had any problems dealing with them. One customer complaint
> does not a bad company make, so pardon me while I ignore your
> vituperative ravings. Time to place another order.
>
> Tom Donaly KA6RUH

Right on.

Bill W0IYH

3808. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Gerd Henjes <ghenjes1@twcny.rr.com>
Message-ID: <vN%S4.3894$ux.289698@typhoon.nyroc.rr.com>
Source record: 60647
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

Are you a late bloomer Kevin? Gerd, W2ISB

"Kevin McQuiggin" <mcquiggi@sfu.ca> wrote in message
news:391C479A.ED335B9A@sfu.ca...
> Hi Folks:
>
> I've been licenced for 23 years, currently VE7ZD, and am in graduate
> school up here near Vancouver, BC.

3809. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <391c8a75.5279058@news.mcn.org>
Source record: 60648

On Fri, 12 May 2000 21:17:47 GMT, anti.spam@netcentral.co.uk (Martin Pickering {UK}) wrote:

>In article <Pine.GSO.4.05.10004251409090.1122-100000@james.hwcn.org>,
>Jeff VE3NVY <aj713@hwcn.org> wrote:
>
>>remember th egoo dol ddays when every electronic stor ein the country had
>>a heathkit product on their shelf where every radio enthisiat had a
>>project half finishe dsitting on his desk and half the radios on th
>>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>>there is a new comapny starting up in hamilton ontario an dthey will ahve
>>kits for everything from kits gor you rkids (like a simple blinky flasher
>>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>>home an daccesorcies be it a dsp or even an antennae tuner it will be
>>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>>word aroun d finally the ol dwill b enew again wouldnt you all like a
>>kit to say i built it myself
>>
>>
>>jeff
>>aj713@hwcn.org -- or--
>>ve3nvy@rac.ca
>
>I didn't understand a word of that. I hope the kit instructions are in
>English!
>
>See
>http://www.satcure.co.uk/design.htm
>for kits.
>
>
Here's a translation:

remember the good old days when every electronic store in the country had a heathkit product on their shelf where every radio enthusiast had a project half finished sitting on his desk and half the radios on the market were home brewed and not those fancy new electronic gizmos well there is a new company starting up in hamilton ontario and they will have kits for everything from kits for your kids (like a simple blinky flasher) to a kit for granddads and dad a qrp transmitter for his station at home and accessories be it a dsp or even an antenna tuner it will becoming soon watch this newsgroup for more info and when it starts pass the word around finally the old will be new again wouldn't you all like a kit to say i built it myself

3810. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "Henry A. Kolesnik" <wd5jfr@tulsa.oklahoma.net>
Message-ID: <391C97CE.E80AC126@tulsa.oklahoma.net>
Source record: 60649
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

i wish i was!!!!
hank wd5jfr

Gerd Henjes wrote:

> Are you a late bloomer Kevin? Gerd, W2ISB
>
> "Kevin McQuiggin" <mcquiggi@sfu.ca> wrote in message
> news:391C479A.ED335B9A@sfu.ca...
> > Hi Folks:
> >
> > I've been licenced for 23 years, currently VE7ZD, and am in graduate
> > school up here near Vancouver, BC.

3811. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <pQ0T4.63040$fV.3846262@bgtnsc05-news.ops.worldnet.att.net>
Source record: 60650

Quantity 50, of the (size) 82- ferrite toroids would cost about $60.00 *
with shipping.
Stacked this would be about 12" long.
Anyone have opinions on how 50 toroids stacked would compare to a
3/4"x12" rod?

* see http://bytemark.com/amidon/prfcore.html
--
Mike Knowlton
Panama City Fl.

> I'd like experiment with rods .75" in diameter and 12" long or longer
> for VLF/HF but I sure don't want to pay the big money asked for
> them---some rods go for $100

3812. Re: Can You ID this tube?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: JOHN <johnNOjoSPAM@thirdeye30.freeserve.co.uk.invalid>
Message-ID: <1d23e8d6.e9ffd816@usw-ex0106-047.remarq.com>
Source record: 60651

I have a shake full of valves and they are not for target
practice, HI. Keep the valve and find a use for it, if it is R.F.
try building something with it. That is what I do with mine.

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

3813. Re: Can You ID this tube?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Bob Weiss <bweiss@carroll.com>
Message-ID: <391C9C2C.3FF64770@carroll.com>
Source record: 60652

The type number of this tube is simply 15E. The rest of the designation on the box indicates joint Army-Navy (JAN) specification, and manufacture by Eimac (CIM). The tube is also designated as types 4C30, 8023, or 3-15A3.

It is an internal anode UHF transmitting triode, originally designed for use in WW2 vintage radar equipment.Filament ratings are 5V@4A, maximum plate dissipation 15W. The 2 pins at the bottom are filament connections, the top pin is the grid, and the side pin is the plate.

Bob Weiss N2IXK

"Mr. Wires" wrote:

> Can anyone identify what kind of tube this is & what it was used for?
>
> It's marked "JAN-CIM-15E", & carries the "Eimac" brand. Markings
> (ratings?) stamped on one side of the box read:
>
> Ep = 1000 v
>
> Ip = 0.5 ma
>
> Eg = "46" is written in pencil here
>
> "Peak a - 46" is also written in pencil at the top of all these
> markings.
>
> I have posted pictures of the tube & box at:
>
> http://members.xoom.com/_XMCM/studio_tech/tube.html
>
> I am guessing that this is some kind of transmitter tube.
> I have a number of these NIB. Are these only good for
> target practice?! (I found them at a garage sale).
>
> Thanks,
>
> Mr. Wires (post here or delete "NOSPAM" to e-mail)

3814. Re: Learning how to troubleshoot

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <10677-391C9836-52@storefull-127.iap.bryant.webtv.net>
Source record: 60653

ITS KINDA SCAREY TO HAVE A LICENSED HAM WITH A DVM WHO DOESN'T KNOW HOW
TO USE IT.

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

3815. Re: PC Board Developer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: dialcover@webtv.net
Message-ID: <10677-391C9A49-53@storefull-127.iap.bryant.webtv.net>
Source record: 60654

SURE / DON'T KNOW

disregard caps, visual problem
Bill Turner WA0ABI
1117 Pike Street
Saint Charles, MO 63301
636-949-2210

3816. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Dave <dlawryNOdlSPAM@norfolk-county.com.invalid>
Message-ID: <136f266c.e4d26cdc@usw-ex0107-050.remarq.com>
Source record: 60655
Cross-posted to: sci.electronics.components,rec.radio.amateur.homebrew

There are the tradeoffs. Higher If and image rejection. How about
going to 10.7 mhz with a ceramic filter for image rejection and then
down to 455 for the final sideband filtering?

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

3817. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "John Kirk, VE6XT" <jakirk@calcna.ab.ca>
Message-ID: <Pine.A41.4.05.10005121928310.39216-100000@srv1.calcna.ab.ca>
Source record: 60656

Tons during aurora - it is the only mode that really works.
73
John

On Fri, 12 May 2000 earlve3ab@igs.net wrote:

> i HVAE a 2 mtr cw transmitter..not homebrew..but a fairly rare
> microwave modules unit.,.havent made a qso with it yet but hope to.
> just wondering if there is any activit y on 2 cw these days?..73 Earl
> VE3aB
> On Thu, 11 May 2000 21:22:02 GMT, fretman_2@my-deja.com wrote:
>
> >Anyone with a link to a 2 meter CW transmitter/transceiver???
> >
> >Thanks!
> >
> >
> >Bill Harbour
> >KD4PWB
> >
> >
> >Sent via Deja.com http://www.deja.com/
> >Before you buy.
>
>
>

3818. Re: HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: john graesser <graesser@tca.net>
Message-ID: <shpco9rukcp140@corp.supernews.com>
Source record: 60657

Bill Erwin <werwin@columbus.rr.com> wrote in message
news:n71T4.1095$0T2.48625@typhoon.columbus.rr.com...
> A am interested in a HF transceiver (1K, or so, price range). I have been
> looking at the TS-570D and the IC-706MKIIG.
> My main interests are CW and digital modes. But also enjoy a good SSB QSO.
I
> would appreciate the views of anyone especially those that own either of
> these transceivers.
> Thanks, Bill
>
I can't speak for the 570 but I do have a 706mkIIG and unless you are
interested in its capabiliites in going mobile and working vhf and uhf you
would be better served going for a larger hf only rig. I considered the fact
that I was getting a 6m, 2m and 70cm all mode just as important as getting
another hf radio. Even with the front panel light turned off, mine runs warm
to the touch, even when just sitting there on receive. The button interface
requires either short or long presses on the buttons, so I wouldn't
recommend it to anyone with any kind of shaky hand. It also took a little
getting used to cycling around the menus and I wouldn't even try to do that
mobile.
I have mine feeding a tuner so I don't know how well it handles high swr.
thanks, John.
kc5dwd

3819. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <8fid88nen1@slb1.atl.mindspring.net>
Source record: 60658
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

And then later...

the Amateur Guiglilemo Marconi was awarded a Nobel Prize!

Peter K1PO

"Wes Stewart" <n7ws@arrl.net> wrote in message
news:391ca9c9.125484864@news.azstarnet.com...
> On 12 May 2000 18:41:38 GMT, glass2@glass2.lexington.ibm.com wrote:
>
> >In <391C479A.ED335B9A@sfu.ca>, Kevin McQuiggin <mcquiggi@sfu.ca> writes:
> >>Hi Folks:
> >>
> >>I've been licenced for 23 years, currently VE7ZD, and am in graduate
> >>school up here near Vancouver, BC.
> >>
> >>I'm researching amateur radio and its history. I'm specifically
> >>interested in inventions, discoveries, or techniques that were developed
> >>within amateur radio and later spread to the electronics industry.
> >>Similarly, some of our operating techniques and procedures were later
> >>widely adopted by other services.
> >
> >
> Marconi was an amateur.
>
> N7WS

3820. make money

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: 4Roses@Access1.NET
Message-ID: <391B4C41.41C66814@Access1.Net>
Source record: 60711

Make $1000 of an initial $6 investment very easy, not a scam, really works!

Make Money Now! It doesn't get any easier than this. Just follow this awesome money making program, and you'll be collecting a nice supplemental income in no time. You don't have to buy anything! You don't have to sell anything! This is not a Paid To Surf Program or a Paid to Click Program. You don't have to surf the Internet for a ton of hours or click on little banners a million times. This program is fast, simple, easy, and most importantly....IT WORKS!

Mission: To make a one time investment of $6.00 and have it return to you over $6,000.00

The program really works! Read this testimonial first!
A little while back, I was browsing through newsgroups and websites, just like you are now, and came across an article similar to this. It said that you could make thousands of dollars within weeks with only an initial investment of $6.00! So I thought, "Yeah right, this must be a total scam." But like you and me, i was curious, so i kept reading. Anyways it said that you send $1.00 to each of the 6 names and addresses stated in the article. After you send the mail, you then place your own name and address in the the bottom of the mailing list and post the article in at least 200 newsgroups. No catch, that was it. So after thinking it over and talking to a few people about it, I figured, "what have I got to lose other than $6.00 and a few stamps?" So I decided to try it and I mailed out my measly 6 bucks. Well Guess What?! Within 7 days, I started getting money in the mail! I was shocked! I figured it would end soon, but the money just kept coming in. Mail after mail with a 1 dollar bill inside. In the first week, I made $25.00 - Wow, I already made back my initial investment with some extra lunch money. But next week came more mail. By the end of the second week, I had made over $100! In the third week, I had over $1200.00 and it was still growing. By the end of the 4th week, I had well over $6,000.00! I couldn't believe it. It was certainly worth $6.00 and 6 stamps. And the best thing - it's perfectly legal! Thanks a bunch to everyone involved!

Important: This is not a rip-off; it is not indecent; it is not illegal; and it is 99% no risk - it really works!
Please note: Please follow the directions EXACTLY, and $6,000.00 or more can be yours in 20 to 60 days. This program remains successful because of the honesty and integrity of the participants. Please continue its success by carefully adhering to the instructions.
You will now become part of the Mail Order business. In this business

your product is not solid and tangible, it's a service. You are in the business of developing Mailing Lists. Many large corporations are happy to pay big bucks for quality lists. However, the money made from the mailing lists is secondary to the income which is made from people like you asking to be included in that list.
4 Basic Steps to Success
STEP 1 : Get 6 separate pieces of paper and write the following on each piece of paper "PLEASE PUT ME ON YOUR MAILING LIST." Write on each piece of paper your mailing address and your email address. Now get 6 US $1.00 bills and place ONE inside EACH of the 6 pieces of paper so the bill will not be seen through the envelope (to prevent thievery). Place one paper in each of the 6 envelopes and seal them. You should now have 6 sealed envelopes, each with a piece of paper stating the above phrase with
your house and email address. What you are doing is creating a service. THIS IS ABSOLUTELY
LEGAL! You are requesting a legitimate service and you are paying for it! Any doubts? Please refer
to Title 18 Section 1302 & 1341 of the Postal lottery laws or call the US Postal office at 1-8000-725-2161.
STEP 2 : Mail the 6 envelopes to the following addresses:

1) Christopher L. Sloan
2200 Hickory St.
H.S.U. Box #14579
Abilene, TX 79698

2) Karen Lohning
155 Blue Spruce Ct.
Delaware, Ohio 43015

3) B. Stoltenberg
7149 Wynter Way
Indianapolis, IN 46250

4)J. Hanan
10871 Poyntell Cir.
San Diego, CA, 92131

5)Rob Barnes
14575 Spingvale st.
Poway, CA, 9206465t

6)Eric Larose
17757 Corazon Pl.
San Diego, CA, 92127

STEP 3 : Now copy this list and take the #1 name off the list that you see above and move the other names
up (6 becomes 5, 5 becomes 4, etc...) and add YOUR name as #6 on the list.
STEP 4 : Change anything you need to, but try to keep this article as

close to the original as possible. Now try to post your amended article to at least 200 newsgroups (chat rooms, message boards, guest books, bulletin boards...u know). You don't have to post 200, you can do more or less, but remember, THE MORE YOU POST, THE MORE CASH YOU MAKE! Keep a copy of these steps for yourself, and whenever you need cash, you can use it again, and again.
PLEASE REMEMBER : This program remains successful because of the honesty and integrity of the participants and by their carefully adhering to the directions. Loook at it this way. If you are a person of integrity, the program will continue and the CASH that so many others have received will come your way.
NOTE : You may want to retain every name and address sent to you, either on a computer or hard copy and keep the notes peple send you. This VERIFIES that you are truly providing a service. (Also, it might be a good idea to wrap the $1 bill in dark paper to reduce the risk of mail theft. So, as each post is downloaded or read, and the directions carefully followed, six members will be reimbursed for their participation as a List Developer with one dollar each. Your name will move up the list geometrically so that when your name reaches the #1 position you will be receiving thousand of dollars!! What an opportunity for only a one time investment of of $6.00 and six stamps. Send it now, add your own name to the list, post it, and you're in business!
To make sure you don't get into trouble with Uncle Sam, make sure you declare your extra income. Remember, this is LEGAL> You are using the Internet to advertise your business. What is that business? You are creating a mailing list of people who are interested in home based computer and online business and methods of generating income at home. Remember, people send you a small fee to be addesd to your mailing list. It is legal. What you do with your list of names is up to you. so build your mailing list, keep good accounts, declare your income and pay your taxes. By doing this you prove your business intentions.
How Much Can I Really Make?
Out of 200 postings (which should take no more than 1 hour) you receive only 7 replies (a very low percentage). So then you just made $7.00 with your name at #6 on the letter. Now each of the 7 people make around 200 postings with your name at #5 and 7 more people respond, you just made $49.00. Now those 49 people put up another 200 posts each, and still only 7 more reply from each person, you just made $343.00 with your name at #4. Following the same pattern, you would make $2401.00 with your name at #3, $16,807.00 at #2, and $117,649.00 at #1. And remember, that's only if 7 people reply each time!
Additional NOTES :
1) In some countries, the export of the country's exchange is illegal. But you can get the license to do this from the post office, explaining the above statements (that you have an online busines, etc.). You may have to pay an extra tax, but that's OK, the amount of the incoming CASH is HUGE!!
2) You may want to buy mailing and email lists for future CASH, or

database of spreadsheet software.
3) You may eventually want to rent a P.O. Box due to the large amount of mail you will receive. If you wish to stay anonymous, you can invent a name to use, as long as the postman will deliver it. Just make sure all the addresses are correct.
4) If you're really not sure or still think this can't be for real, please print a copy of this article and give it to someone who really needs the CASH, and see what happens.
5) For a business to be successful, be honest and fair.

3821. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <391bfb69.11471303@news.igs.net>
Source record: 60712

i HVAE a 2 mtr cw transmitter..not homebrew..but a fairly rare
microwave modules unit.,.havent made a qso with it yet but hope to.
just wondering if there is any activit y on 2 cw these days?..73 Earl
VE3aB
On Thu, 11 May 2000 21:22:02 GMT, fretman_2@my-deja.com wrote:

>Anyone with a link to a 2 meter CW transmitter/transceiver???
>
>Thanks!
>
>
>Bill Harbour
>KD4PWB
>
>
>Sent via Deja.com http://www.deja.com/
>Before you buy.

3822. fs kam all mode

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: hcrane@thezone.net
Message-ID: <391baaa8.187186147@news.thezone.net>
Source record: 60713

i have a kam all mode all hookups for vhf and hf
all manuels...and radio to go with it vhf.
i am seling
or will trade for some thing of equal value
playstation and games
or burner any thnig give me offers.

3823. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fgl3t$db4$1@plutonium.btinternet.com>
Source record: 60714

You don't need a transformer. If the diode ring needs to be
terminated with 50 ohms for correct operation then just connect a 47
or 56 ohm resistor across it. But very likely there's no need.

The amplifier could not care less what impedance is driving it. Don't
listen to scary old wives' tales about impedance matching at such
points in the circuit.
--
Regards, Reg.
==========
http://www.btinternet.com/~g4fgq.regp
==========
<fretman_2@my-deja.com> wrote in message
news:8ff7bdtuc1@nnrp1.deja.com...
> I've build a diode ring double balance mixer...50 ohms at each port.
I
> have a Radio Shack Pocket Amplifier that I'm using for audio
> amplification...5k ohms input. How can I build a xformer to
transform
> the 50ohms to 5k ohms audio???
>
> Thanks!
>
> Bill Harbour
> KD4PWB
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

3824. Re: Davis Instruments WeatherLink - Email Correction

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: elminstr@mrtc.com
Message-ID: <8fgiig$k0a$1@nd.eastky.net>
Source record: 60715
Cross-posted to: rec.radio.amateur.digital.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Sorry for the wrong E-mail address. I had forgotten that I had it set up
for anti-spam. Correct E-mail is kd4mkb@qsl.net

Bob Ratliff
KD4MKB
kd4mkb@qsl.net

noone@home.net (Bob Ratliff) wrote in
<MPG.1383ba364257265c989680@news.mrtc.com>:

>I am looking for schematics/plans for the Davis Instruments WeatherLink.
>If anyone has any info, it would be greatly appreciated.
>
>Thanks,
>
>Bob Ratliff
>KD4MKB
>kd4mkb@qsl.net

3825. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <w0TS4.46438$so1.540488@news20.bellglobal.com>
Source record: 60716

earlve3ab@igs.net wrote in message <391bfb69.11471303@news.igs.net>...
>i HVAE a 2 mtr cw transmitter..not homebrew..but a fairly rare
>microwave modules unit.,.havent made a qso with it yet but hope to.
>just wondering if there is any activit y on 2 cw these days?..73 Earl
>VE3aB
>On Thu, 11 May 2000 21:22:02 GMT, fretman_2@my-deja.com wrote:
>

Just wait for an aurora, and there'll be loads of cw (only usable mode
during aurora) around 144.200 plus and minus. You'll be surprised!
VE3MAL

3826. RF Sponge -"solved"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <391BFD68.9559F799@lafn.org>
Source record: 60717

Great news,

My friend Hugh, W6WTU has solved his "RF Sponge-QTH problem and
wishes to thank everyone who made suggestions.
The following message is from W6WTU, Hugh Wells.
Thank you EVERYONE for your help.
73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

================
Please forward this note to Hal and EVERYONE on Digests
as they perhaps will be interested in what has been done to find
and resolve the RF Sponge situation at my house.

Hal was absolutely correct about my "house" location NOT being an RF
Sponge. I appreciate his effort and attention to my problem.

As a quick history summary, we've been chasing the RF Sponge situation
for a little over two years and have now resolved the problem with the
repair of the 12db Comet antenna. A solder joint had come apart in the
upper 12-foot section and even with the internal components laying out
on the ground, the problem wasn't evident.

While measuring the values of the internal disc capacitors I discovered
the bad joint and sweat it together with solder. The antenna now
exhibits the 12db design gain as it should.

To actually pin point the antenna as a problem required some lengthy
antenna range monitoring and comparison with known antennas along with
another repeater site located two miles north.

For antenna gain comparison tests, I built up a folded dipole which
exhibited a 3db cardioid pattern, and a 5-element Yagi with a design
gain
of 9db. The 12db Comet compared equally with the 3db folded dipole and
failed against the Yagi. BTW: VSWR never appeared to be an issue and
was below 1.8:1 on all antennas - even the bad Comet.

The test method used was to operate the respective antennas in a
receiving mode while keying up three remote repeaters individually
located beyond 25 miles and spread equally across a 170 degree
horizontal
plane. Signal strength and noise was compared between each of the three
sites as well as to how each antenna performed relative to each site.

The repeater located 2-miles north was the one operating as desired and the plan was to achieve the same receiving results from the "house" location since the two locations are of comparable height and view of the terrain. That has now been achieved.

While monitoring mobile stations some 30 miles away through the repeater and simultaneously through the "house" receiver, the signal level and popcorn noise are nearly identical for all of the mobiles.

Therefore, it appears that the RF Sponge issue has now been resolved with the repair of the 12db Comet antenna.

Thanks and 73
Hugh, W6WTU

3827. >>>> Dayton Vendors <<<<<

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: KI8IK <ki8ik@my-deja.com>
Message-ID: <8fh9bj$5ja$1@nnrp1.deja.com>
Source record: 60718
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.morse

If you're a Hamvention vendor who plans on selling QRP equipment please
contact me at KI8IK@arrl.net. I'm compiling a list of QRP vendors for
subscribers of the QRP-L reflector. This will help them easily locate
you among the thousands of sellers in attendance.

Items of interest include:

Used QRP gear.
CW keys and keyers.
Portable HF antennas.
QRP books.
Gell cells/chargers/solar cells.
Workbench supplies/soldering stations.
Parts for homebrew (transistors, var caps, PCB stock)
Crystals near QRP frequencies.

Please pass along:
1. Call or Business name.
2. Hamvention space #.
3. Description of items.

73,
Mike

--
Michael Ostrowski - KI8IK
Saline, MI

KI8IK@arrl.net

Sent via Deja.com http://www.deja.com/
Before you buy.

3828. Re: This hot little whore can fuck all day long... 92144

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: TJM <tjm2509@uswest.net>
Message-ID: <391C2725.B98BC801@uswest.net>
Source record: 60719
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

Your'e the WHORE This post does not belong here. If you think this is so hot, why can't people email you directly?

Hi. This is the qmail-send program at albqpop1.albq.uswest.net.
I'm afraid I wasn't able to deliver your message to the following addresses.
This is a permanent error; I've given up. Sorry it didn't work out.

<me@home.com>:
24.0.95.23 does not like recipient.
Remote host said: 550 <me@home.com>... Mailbox disabled for this recipient
Giving up on 24.0.95.23.

me@work.net wrote:

> http://www.preciousteens.freeteen.nu
> http://www.fineteens.freeteen.nu
> http://www.sleepingteen.freeteen.nu
> Welcome to the Teen circle. We have everything from teens being spied on to teens fucking. Cum check us out without having all the annoying banners and popups. New pages are added daily!!!!! You people keep complaining and having the sites shut down will just piss me off more to advertise about 5 times more then I was. If you don't like porn, then you don't have to view the sites. At least let those that like porn be able to see it. Just be thankful that I am considerate enough not to put pictures in the postings. You won't stop me, so stop trying. Just accept what you get and don't make it worse on yourselves!!!!
>
> W^

3829. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <ZUWS4.20772$sB3.8028@news.indigo.ie>
Source record: 60720

>Anyone with a link to a 2 meter CW transmitter/transceiver???
>
>Thanks!
>
>
>Bill Harbour
>KD4PWB

http://homepage.eircom.net/~ei9gq

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://homepage.eircom.net/~ei9gq

3830. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <_UWS4.20773$sB3.8028@news.indigo.ie>
Source record: 60721

```
>> SOLNOID2.exe is an updated and improved version of successful program
>> Solenoid.exe which it now replaces.
>
>Is an UNIX version available ?

SOLNOID2 will run under Dosemu, the Linux Dos emulator.

73, Ed.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://homepage.eircom.net/~ei9gq
```

3831. Re: This hot little whore can fuck all day long... 92144

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: ReferenceCount <rc@rc.not>
Message-ID: <8fhfuk$hd0$1@web1.cup.hp.com>
Source record: 60722
Cross-posted to: rec.skiing.backcountry,rec.radio.amateur.antenna,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.policy,rec.photo.equipment.aps,rec.photo.equipment.large-format,rec.photo.film+labs,rec.photo.marketplace

TJM wrote in message <391C2725.B98BC801@uswest.net>...
>Your'e the WHORE This post does not belong here.

more spam disguised as a complaint about spam.

Don't fall for it.

rc

3832. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fhhlkemv1@nnrp1.deja.com>
Source record: 60723

I don't have a reference handy....do General Class hams (USA) have
priveldges from 144.000 to 144.100Mhz CW???

Anyone got a circuit for a 2m CW transmitter??

Bill
KD4PWB

In article <w0TS4.46438$so1.540488@news20.bellglobal.com>,
"HGE" <hg.enqvistNO_SPAM@sympatico.ca> wrote:
>
> earlve3ab@igs.net wrote in message <391bfb69.11471303@news.igs.net>...
> >i HVAE a 2 mtr cw transmitter..not homebrew..but a fairly rare
> >microwave modules unit.,.havent made a qso with it yet but hope to.
> >just wondering if there is any activit y on 2 cw these days?..73
Earl
> >VE3aB
> >On Thu, 11 May 2000 21:22:02 GMT, fretman_2@my-deja.com wrote:
> >
>
> Just wait for an aurora, and there'll be loads of cw (only usable
mode
> during aurora) around 144.200 plus and minus. You'll be surprised!
> VE3MAL
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3833. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fhiemfun1@nnrp1.deja.com>
Source record: 60724

I'll give the 50ohm resistor a try.

It's not especially that I'm concerned about the DBDRM (double balance diode ring mixer) seeing 50 ohms...I'm more concerned about the level of the signals coming out of it. The CW signals that I'm after are very faint.

Here's the setup....rf pre-amp & homebrew vfo into homebrew DBDRM with audio into Radio Shack pocket amp...a direct conversion receiver I guess.

Here's what I'm doing. Say I hear CW on 7.110 on my SW receiver. I tune my homebrew VFO to 7.100Mhz which is inturn injected into the DBDRM. The antenna jack of the DBDRM is connected to an RF preamp. The audio at the other end is heavily loaded with broadcast band stations and very little CW (I can copy the CW but the audio faint). Big SW stations boom when I tune across them and I have to cut back on the drive of the VFO to stop the howl. I'm thinking the faint CW audio may be the impedance mismatch but it may be another problem.

If I terminate the 50ohm port on the DBDRM I'm still faced with transforming 50ohms to 5kohms.

I'd like to get rid of the BCI but that's down on my list for right now. I'd like to get a better copy on the CW signals first.

Thanks!

Bill
KD4PWB

In article <8fgl3t$db4$1@plutonium.btinternet.com>,
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> You don't need a transformer. If the diode ring needs to be
> terminated with 50 ohms for correct operation then just connect a 47
> or 56 ohm resistor across it. But very likely there's no need.
>
> The amplifier could not care less what impedance is driving it. Don't
> listen to scary old wives' tales about impedance matching at such
> points in the circuit.
> --
> Regards, Reg.
> ==============================
> http://www.btinternet.com/~g4fgq.regp
> ==============================
> <fretman_2@my-deja.com> wrote in message
> news:8ff7bdtuc1@nnrp1.deja.com...

> > I've build a diode ring double balance mixer...50 ohms at each port.
> I
> > have a Radio Shack Pocket Amplifier that I'm using for audio
> > amplification...5k ohms input. How can I build a xformer to
> transform
> > the 50ohms to 5k ohms audio???
> >
> > Thanks!
> >
> > Bill Harbour
> > KD4PWB
> >
> >
> > Sent via Deja.com http://www.deja.com/
> > Before you buy.
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3834. Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Kevin McQuiggin <mcquiggi@sfu.ca>
Message-ID: <391C479A.ED335B9A@sfu.ca>
Source record: 60725
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

Hi Folks:

I've been licenced for 23 years, currently VE7ZD, and am in graduate school up here near Vancouver, BC.

I'm researching amateur radio and its history. I'm specifically interested in inventions, discoveries, or techniques that were developed within amateur radio and later spread to the electronics industry. Similarly, some of our operating techniques and procedures were later widely adopted by other services.

Hams operate outside of the structured environments within industry, and I think that this freedom has permitted us to invent and discover without being shackled by any policy issues, or possible stigmatism from investigating things that would be considered "too far out in left field" by management and non-ham co-workers.

Examples would be the investigation of wavelengths below 200 meters, with the discovery by hams that such wavelengths were better for propagation than longer waves; packet radio; APRS; propagation studies that were undertaken in the 20s and 30s; facsimile; SSTV; and network operating techniques.

Some of this stuff was regulated, such as the banishment of amateur radio to the "useless" wavelengths < 200 M, but this sort of proves my point. There's been lots of innovation within the hobby, and the general public now benefits from it.

If anyone could provide me with more examples, or good books or articles on this topic, then that'd be great. Of course I'll give appropriate credit to those who assist!

If you could email me as well as posting your reply, thanks. There's lots of traffic in these groups and I don't want to miss any replies.

73,

Kevin VE7ZD
mcquiggi@sfu.ca

3835. Wanted: Atlas Mobile Mount

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: jbr101@my-deja.com
Message-ID: <8fhkuvioh1@nnrp1.deja.com>
Source record: 60726
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I'm looking for a mobile mount for the Atlas 180/210/215 series of
transceivers.

If you have one kicking around you want to sell please email me.

73,
Jeff
N6MNI

Sent via Deja.com http://www.deja.com/
Before you buy.

3836. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "Dana H. Myers K6JQ" <Dana@Source.Net>
Message-ID: <391C517F.75EF77AB@Source.Net>
Source record: 60727

Technicians and above (i.e., all amateur except legacy Novices)
have access to Morse-only segments at 50.0-50.1MHz and 144.0-144.1MHz.

Morse credit isn't required to operate in Morse-only segments.

fretman_2@my-deja.com wrote:

> I don't have a reference handy....do General Class hams (USA) have
> priveldges from 144.000 to 144.100Mhz CW???

--
Dana K6JQ DoD #j
dana@source.net

3837. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8fhj92$146i$1@ausnews.austin.ibm.com>
Source record: 60728
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

In <391C479A.ED335B9A@sfu.ca>, Kevin McQuiggin <mcquiggi@sfu.ca> writes:
>Hi Folks:
>
>I've been licenced for 23 years, currently VE7ZD, and am in graduate
>school up here near Vancouver, BC.
>
>I'm researching amateur radio and its history. I'm specifically
>interested in inventions, discoveries, or techniques that were developed
>within amateur radio and later spread to the electronics industry.
>Similarly, some of our operating techniques and procedures were later
>widely adopted by other services.
>
>Hams operate outside of the structured environments within industry, and
>I think that this freedom has permitted us to invent and discover
>without being shackled by any policy issues, or possible stigmatism from
>investigating things that would be considered "too far out in left
>field" by management and non-ham co-workers.
>
>Examples would be the investigation of wavelengths below 200 meters,
>with the discovery by hams that such wavelengths were better for
>propagation than longer waves; packet radio; APRS; propagation studies
>that were undertaken in the 20s and 30s; facsimile; SSTV; and network
>operating techniques.
>
>Some of this stuff was regulated, such as the banishment of amateur
>radio to the "useless" wavelengths < 200 M, but this sort of proves my
>point. There's been lots of innovation within the hobby, and the general
>public now benefits from it.
>
>If anyone could provide me with more examples, or good books or articles
>on this topic, then that'd be great. Of course I'll give appropriate
>credit to those who assist!
>
>If you could email me as well as posting your reply, thanks. There's
>lots of traffic in these groups and I don't want to miss any replies.
>
>73,
>
>Kevin VE7ZD
>mcquiggi@sfu.ca
>

How about if I start you off with a pointer to a piece by the guy who invented SSTV, Copthorne Macdonald, VY2CM, in his own words. SSTV was invented at the University of Kentucky, in Lexington, Kentucky.

http://www.ultranet.com/~sstv/history/

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

3838. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <391C53CB.EE529DCF@agilent.com>
Source record: 60729

It's good to terminate the diode mixer with 50 ohms to keep spurious responses down. You can do that with just a resistor. In fact, it's best to terminate it at all frequencies into 50 ohms, assuming it's designed for that, and the resistor will do a good job of that.

As for amplifiers, once you've terminated the mixer properly, you can use about any amplifier. The amplifier "doesn't care" what the source impedance is, especially if it's lower than the rated input impedance. Your source impedance will be the mixer load resistor in parallel with the diode mixer output (source) impedance, likely about 60 ohms or so if you drive the RF port from a 50 ohm source.

Now where that all DOES become important is from considerations of noise. Maybe you'll want to try to improve things in this area once you get it basically working. If you're trying for the best possible sensitivity, you'd want to pay close attention to the input voltage noise of the following audio amplifier: the lower the better. If you look up info on what the stereophiles do for "moving coil cartridge" pre-preamplifiers, you'll be on the right track (if you avoid the hype...a bit difficult to do!). Some of them use transformers to step the source impedance up a bit, and some just use amplifiers designed for lowest possible voltage noise: you can get down to perhaps 0.5 nanovolts/rtHz, but I can about guarantee your Radio Shack amp will be up above 10nV/rtHz. If you want to get into a more optimum amplifier for that sort of work, a good place to start might be an Analog Devices AD797 op amp, which gets to about 0.9nV/rtHz audio-range noise and is extremely low distortion to boot. I believe the data sheet, available on AD's web site, will have plenty of applications circuits. There are some other audio op amps that have pretty low voltage noise and are cheaper and maybe a bit easier to get. Even the venerable NE5534 is pretty good. You can build a "preamp" stage to add in between your mixer output and the Radio Shack amp...just a non-inverting op amp configuration with a gain of 10 or 20. -- It's also good to have a simple low-pass filter between the mixer output and the audio amplifier input, in case there are any fairly large RF-range outputs from the mixer which can get rectified in audio amp input stages and cause troubles.

Cheers,
Tom

fretman_2@my-deja.com wrote:
>
> I've build a diode ring double balance mixer...50 ohms at each port. I
> have a Radio Shack Pocket Amplifier that I'm using for audio

> amplification...5k ohms input. How can I build a xformer to transform
> the 50ohms to 5k ohms audio???
>
> Thanks!
>
> Bill Harbour
> KD4PWB
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

3839. Can You ID this tube?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "Mr. Wires" <NOSPAMwires@bigfoot.com>
Message-ID: <391C575A.4AC452B2@bigfoot.com>
Source record: 60730

Can anyone identify what kind of tube this is & what it was used for?

It's marked "JAN-CIM-15E", & carries the "Eimac" brand. Markings
(ratings?) stamped on one side of the box read:

Ep = 1000 v

Ip = 0.5 ma

Eg = "46" is written in pencil here

"Peak a - 46" is also written in pencil at the top of all these
markings.

I have posted pictures of the tube & box at:

http://members.xoom.com/_XMCM/studio_tech/tube.html

I am guessing that this is some kind of transmitter tube.
I have a number of these NIB. Are these only good for
target practice?! (I found them at a garage sale).

Thanks,

Mr. Wires (post here or delete "NOSPAM" to e-mail)

3840. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <391c5f15$0$25412@news.voyager.net>
Source record: 60731

I am glad you made me aware of this Will,I came close to placing an order with them once. Rob
"Will" <no@spam.com> wrote in message news:391B0423.451C@spam.com...
> What in hell is going on with Amidon???? I already made nearly 20
> telephone calls this past week to find out about my overdue order and
> nobody know from S**T about what is going on---from the receptionist
> on.
>
> Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> business with Amidon to seek another supplier and to avoid dealing with
> them direct.
>
> This company, as represented by their employees, is truly second rate
> and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> OPERATION! Everyone I've talked to has trouble speaking on the
> telephone and English is NOT their native language.
>
> Consumer beware...
>

3841. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fhojmmtd1@nnrp1.deja.com>
Source record: 60732

Tom:

Thanks for the help!!

This project is the fartherest I've ever gone with building my own homebrew receiver. I have in mind, once the rcvr is working properly building a keyable rf amp for the transmitter portion....making an xcvr.

I definetely will put a 50 ohm resistor from the audio output to ground.

BTW...what is spurious responses???

Thanks!

Bill

In article <391C53CB.EE529DCF@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
> It's good to terminate the diode mixer with 50 ohms to keep spurious
> responses down. You can do that with just a resistor. In fact, it's
> best to terminate it at all frequencies into 50 ohms, assuming it's
> designed for that, and the resistor will do a good job of that.
>
> As for amplifiers, once you've terminated the mixer properly, you can
> use about any amplifier. The amplifier "doesn't care" what the source
> impedance is, especially if it's lower than the rated input
> impedance. Your source impedance will be the mixer load resistor in
> parallel with the diode mixer output (source) impedance, likely about
> 60 ohms or so if you drive the RF port from a 50 ohm source.
>
> Now where that all DOES become important is from considerations of
> noise. Maybe you'll want to try to improve things in this area once
> you get it basically working. If you're trying for the best possible
> sensitivity, you'd want to pay close attention to the input voltage
> noise of the following audio amplifier: the lower the better. If you
> look up info on what the stereophiles do for "moving coil cartridge"
> pre-preamplifiers, you'll be on the right track (if you avoid the
> hype...a bit difficult to do!). Some of them use transformers to step
> the source impedance up a bit, and some just use amplifiers designed
> for lowest possible voltage noise: you can get down to perhaps 0.5
> nanovolts/rtHz, but I can about guarantee your Radio Shack amp will be
> up above 10nV/rtHz. If you want to get into a more optimum amplifier
> for that sort of work, a good place to start might be an Analog
> Devices AD797 op amp, which gets to about 0.9nV/rtHz audio-range noise
> and is extremely low distortion to boot. I believe the data sheet,
> available on AD's web site, will have plenty of applications

> circuits. There are some other audio op amps that have pretty low
> voltage noise and are cheaper and maybe a bit easier to get. Even the
> venerable NE5534 is pretty good. You can build a "preamp" stage to
> add in between your mixer output and the Radio Shack amp...just a
> non-inverting op amp configuration with a gain of 10 or 20. -- It's
> also good to have a simple low-pass filter between the mixer output
> and the audio amplifier input, in case there are any fairly large
> RF-range outputs from the mixer which can get rectified in audio amp
> input stages and cause troubles.
>
> Cheers,
> Tom
>
> fretman_2@my-deja.com wrote:
> >
> > I've build a diode ring double balance mixer...50 ohms at each
port. I
> > have a Radio Shack Pocket Amplifier that I'm using for audio
> > amplification...5k ohms input. How can I build a xformer to
transform
> > the 50ohms to 5k ohms audio???
> >
> > Thanks!
> >
> > Bill Harbour
> > KD4PWB
> >
> > Sent via Deja.com http://www.deja.com/
> > Before you buy.
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3842. IRF510

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fhp0rnga1@nnrp1.deja.com>
Source record: 60733

Anyone with a suitable schematic for a 5w IRF510 power amp?? I'd like to boost the power of my milliwatt rigs. Doesn't the IRF510 withstand high SWR better than a bipolar transistor???

Thanks!

Bill
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

3843. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1205001607450001@dialup-15.hip.cam.org>
Source record: 60734
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

In article <391C479A.ED335B9A@sfu.ca>, Kevin McQuiggin <mcquiggi@sfu.ca> wrote:

> Hi Folks:
>
> I've been licenced for 23 years, currently VE7ZD, and am in graduate
> school up here near Vancouver, BC.
>
> I'm researching amateur radio and its history. I'm specifically
> interested in inventions, discoveries, or techniques that were developed
> within amateur radio and later spread to the electronics industry.
> Similarly, some of our operating techniques and procedures were later
> widely adopted by other services.
>
> Hams operate outside of the structured environments within industry, and
> I think that this freedom has permitted us to invent and discover
> without being shackled by any policy issues, or possible stigmatism from
> investigating things that would be considered "too far out in left
> field" by management and non-ham co-workers.
>
> Examples would be the investigation of wavelengths below 200 meters,
> with the discovery by hams that such wavelengths were better for
> propagation than longer waves; packet radio; APRS; propagation studies
> that were undertaken in the 20s and 30s; facsimile; SSTV; and network
> operating techniques.
>[stuff deleted]

Packet radio already existed. Somebody (I can't remember his position
or whether he was a ham) in what was then the Department
of Communications here in Canada, with a name like deMercado, had had
some experience with Aloha Net in Hawaii. He decided it was time
for hams to move forward, and so he changed the rules in Canada to
allow packet radio, and introduced the Digital License. That license
carried no code test, but what was said to be a more complicated
theory test, and was VHF only, maybe restricted to certain bands. I
thought there was also a segement or two set aside for packet that
only Digital License holders could use. I remember he came and talked
to one of the local clubs in 1977 or 78, so long ago that the details
are vague.

So it's debatable how much ham radio influenced packet radio. On
the other hand, I don't dismiss the value to some individuals, who
got it going in ham radio and played with it, and used that
experience in the commericial area.

I think the influence of ham radio on technology in recent years has diminished. That's less important than whether it is still affecting the young, getting them interested in electronics and radio at a young age and providing them with a place to play with these things.

But up till a certain point, ham radio was basically synonomous with electronics and or radio. You don't have to go any further than Howard Armstrong, who was a ham first and it could be said his work was nothing more than an extension of ham radio, even if it influenced radio tremendously; regeneration (and regenerative receivers) the superheterodyne receiver, the superregenerative receiver and practical FM. You can't do anything in radio without one or more of those things.

A lot of the oscillator circuits are named after people who happened to be hams.

I thought practical narrow band FM for two way communication came from a ham, something like the guy who started Sonar, but that is based on some remembrance.

Amateur satellites certainly must have helped the field. The first OSCAR went up only a few years after Sputnik and must have cost significantly less. The concept of a piggyback launch came from OSCAR, and certainly others have taken advantage of that. There have in recent years been "OSCAR-type" satellites, ie relativley simple and inexpensive, which have probably been mainly experimental but have either helped provide a training ground for satellite work or helped "third world countries" in some way.

And you can find examples of hams supplying practical experience (gained from the hobby) in some of the important projects of the last century. I can't get to it easily, but I read a book about Benchley Park during World War II where they worked on what the other side was doing, and the author mentions right at the end the importance of hams in the practical experience they brought to the process. I think there was a similar mention in a book about radar development during WWII. People would come out of the universites, and know all the theory, but be lost when it came to practical work, but hams had that down because of building their own equipment. And of course when WWII started up, hams ended up filling various technical roles in the armed services.

I thought the first person to play with radio astronomy was a ham. If it was't someone who followed up was.

The US Army tried moonbounce in the forties or fifties, but they needed big arrays and lots of power. Hams followed, using much simpler equipment. I'm not so certain moonbounce has much practical use for society other than hams, since others can put up satellites while hams are somewhat limited, but the process of advancing the art may be as important as whether the technology actually migrates elsewhere.

A lot of the history has been written. The ARRL had or has some books on the history, including that one about "200 meters and down...". "Empire of the Air" by Tom Lewis (and it was a Ken Burns PBS show some years back) dealt with Armstrong, Sarnoff and DeForest and probably is fairly available. There was a book about Armstrong, I can't find my copy right now, first published in the fifties and then in the sixties by Bantam Paperback, that I've found in used book stores that provides good, though not too technical, coverage of his life.

Since you can now get QST easily on CDROM, it would be worth getting the early years, actually get the whole set if you've got the money, and then you can see the history unfolding as it happened. The other ham magazines may not be as useful, since they came later, and more important they aren't as available so cheaply or conveniently.

Once you have the ham history, then you can start exploring where it fits into the rest of electronic/radio history. Whether it was simply implementing something discovered elsewhere, or had impact on society beyond ham radio.

And you might want to dig up an article by John W. Campbell (yes the legendary editor of Astounding/Analog SF magazine) who was a ham and once upon a time wrote some technical articles for CQ. He once wrote an article about "How to be an Amateur" pointing out some of the benefits hams have to innovate for the simple reason that they aren't bound by corporations. I think it was published in an early issue of 73, and then reprinted once or twice. 1971 comes to mind.

Micahel VE2BVW

3844. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: "William E. Sabin" <sabinw@mwci.net>
Message-ID: <391C6A1D.66390907@mwci.net>
Source record: 60735

rob34 wrote:

> I am glad you made me aware of this Will,I came close to placing an order
> with them once. Rob
> "Will" <no@spam.com> wrote in message news:391B0423.451C@spam.com...
> > What in hell is going on with Amidon???? I already made nearly 20
> > telephone calls this past week to find out about my overdue order and
> > nobody know from S**T about what is going on---from the receptionist
> > on.
> >
> > Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> > CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> > business with Amidon to seek another supplier and to avoid dealing with
> > them direct.
> >
> > This company, as represented by their employees, is truly second rate
> > and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> > OPERATION! Everyone I've talked to has trouble speaking on the
> > telephone and English is NOT their native language.
> >
> > Consumer beware...

That has certainly not been my experience with Amidon. Over the years I have spent at least $1000 dollars with them, including more than $100 in the past two weeks, and have had no trouble at all.

None.

Zero.

Zilch.

Bill W0IYH

3845. Re: New program SOLNOID2

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fhh92$3o3$1@plutonium.btinternet.com>
Source record: 60736

Eamon,

Thanks very much about Dosemu and Dos emulalation. I am very
unfamiliar with such matters. I will place your information in a
prominant place in my website.
--
Regards, Reg.
==========
http://www.btinternet.com/~g4fgq.regp
==========
Eamon Skelton <Xnospam@oceanfree.net> wrote in message
news:_UWS4.20773$sB3.8028@news.indigo.ie...
>
> >> SOLNOID2.exe is an updated and improved version of successful
program
> >> Solenoid.exe which it now replaces.
> >
> >Is an UNIX version available ?
>
> SOLNOID2 will run under Dosemu, the Linux Dos emulator.
>
> 73, Ed.
>
>
> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://homepage.eircom.net/~ei9gq
>
>
>
>

3846. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <391C135E.1553@pacbell.net>
Source record: 60737

Will wrote:
>
> What in hell is going on with Amidon???? I already made nearly 20
> telephone calls this past week to find out about my overdue order and
> nobody know from S**T about what is going on---from the receptionist
> on.
>
> Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> business with Amidon to seek another supplier and to avoid dealing with
> them direct.
>
> This company, as represented by their employees, is truly second rate
> and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> OPERATION! Everyone I've talked to has trouble speaking on the
> telephone and English is NOT their native language.
>
> Consumer beware...

I haven't had any problems dealing with them. One customer complaint
does not a bad company make, so pardon me while I ignore your
vituperative ravings. Time to place another order.

Tom Donaly KA6RUH

3847. Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: JGinNY <jwg6@cornell.edu>
Message-ID: <391C71D3.34898ADE@cornell.edu>
Source record: 60738
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

What's the difference between cathode and plate current values? Which is more useful in properly loading-up an RF tube amp?

Reason for this question is that I have an old Swan tcvr, and the meter reads cathode current, not plate current like I have seen on a lot of other rigs.

Would that cathode milliammeter be reading the current returning to the cathode (or B+ supply?) from the plate (across the load)? Or, would read the current _leaving_ the cathode through the tube, towards the positive plate?

The older radio handbooks I have don't mention "cathode current," per se; only plate current. What's the scoop?

mni tks!
jg

3848. Re: Wanted Schematic diagram rogerbeep

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B542342496681D2B22@dial51.netcentral.co.uk>
Source record: 60739

>Robert wrote:
>
>> Hello,
>> Who has a diagram of a rogerbeep that can produce a R or K and a beep?
>>
>> Thanks Robert PD0PVL
>>
>> Homepage : http://members1.chello.nl/~r.voerman/
>> Email : pd0pvl@amsat.org

You'll find circuits at:-

http://www.satcure.co.uk/cb/bleeps.htm

Martin Pickering
http://www.netcentral.co.uk/satcure

3849. Re: Wanted Schematic diagram rogerbeep

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B542342496681D2B47@dial51.netcentral.co.uk>
Source record: 60740

In article <QRrR4.4458$701.78511@news4.giganews.com>,
"Bob" <balbert@cnmnetwork.com> wrote:

>Those things might be cute for the user, but they have to be in the top ten
>of things that annoy people. I just won't communicate with someone who uses
>those gadgets..
>
>73, Bob K6DDX

Spoken in the true tradition of Ham radio, Bob.
But the CB muppets are friendlier.
Ten ten good bud dah-di-dah ;o)

http://www.satcure.co.uk/cb/bleeps.htm

de martin KT66

3850. Re: PC board/schematic program for Macintosh 68040

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B542342696681D2B8A@dial51.netcentral.co.uk>
Source record: 60741

In article <1ea5n9p.3ndyyvcvijpqN@[192.168.1.2]>,
francine@multiweb.nl (francine) wrote:

>Dean Arthur <dearthur@silverstar.com> wrote:
>
>> Looking for Mac-based schematic & pc-board design program.
>
>http://www.douglas.com/
>freeware and lite version.
>
>ftp://ftp.informatik.rwth-aachen.de/pub/packages/PlatoonPCB/
>FAT, 68k and PPC versions available.
>
>http://www.mccad.com/index.html
>Schematic capture and import Orcad.
>McCAD EDS Lite version.
>
>http://www.capilano.com/
>Lite version.
>
>Of course they have full versions too.
>
>--
>francine

I agree with francine.

Also Osmond PCB layout program. See review at
http://www.satcure.exl.co.uk

Martin Pickering

3851. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: anti.spam@netcentral.co.uk
Message-ID: <B542342796681D2BC4@dial51.netcentral.co.uk>
Source record: 60742

In article <Pine.GSO.4.05.10004251409090.1122-100000@james.hwcn.org>,
Jeff VE3NVY <aj713@hwcn.org> wrote:

>remember th egoo dol ddays when every electronic stor ein the country had
>a heathkit product on their shelf where every radio enthisiat had a
>project half finishe dsitting on his desk and half the radios on th
>emarket were homebrewed an dnotthos efancy new electronic gizmos well
>there is a new comapny starting up in hamilton ontario an dthey will ahve
>kits for everything from kits gor you rkids (like a simple blinky flasher
>) to a kit for d\grand dads an d dad a qrp transmitter fo rhis station at
>home an daccesorcies be it a dsp or even an antennae tuner it will be
>coming soon watch this newsgroup fo rmore info an dwhen it starts pass teh
>word aroun d finally the ol dwill b enew again wouldnt you all like a
>kit to say i built it myself
>
>
>jeff
>aj713@hwcn.org -- or--
>ve3nvy@rac.ca

I didn't understand a word of that. I hope the kit instructions are in
English!

See
http://www.satcure.co.uk/design.htm
for kits.

3852. Re: Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: V Wilson <vwilson@jps.net>
Message-ID: <%L_S4.30$v7.5566@nntp3.onemain.com>
Source record: 60743
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

Cathode current is a good way to measure because you can deal with much lower voltage with reference to ground. But be remember, when you measure cathode current you are measuring the total of the plate and grid(s) that make up the tube. The current flow is from negative to positive I.E. cathode to plate and cathode to grid(s). Hope this is of some help

3853. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-12 00:00:00 UTC
From: Will <no@spam.com>
Message-ID: <391C6E92.7CF@spam.com>
Source record: 60744

William E. Sabin wrote:
>
> rob34 wrote:
>
> > I am glad you made me aware of this Will,I came close to placing an order
> > with them once. Rob
> > "Will" <no@spam.com> wrote in message news:391B0423.451C@spam.com...
> > > What in hell is going on with Amidon???? I already made nearly 20
> > > telephone calls this past week to find out about my overdue order and
> > > nobody know from S**T about what is going on---from the receptionist
> > > on.
> > >
> > > Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> > > CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> > > business with Amidon to seek another supplier and to avoid dealing with
> > > them direct.
> > >
> > > This company, as represented by their employees, is truly second rate
> > > and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> > > OPERATION! Everyone I've talked to has trouble speaking on the
> > > telephone and English is NOT their native language.
> > >
> > > Consumer beware...
>
> That has certainly not been my experience with Amidon. Over the years I have
> spent at least $1000 dollars with them, including more than $100 in the past
> two weeks, and have had no trouble at all.
>
> None.
>
> Zero.
>
> Zilch.
>
> Bill W0IYH

Well... I have place many orders years ago with Amidon and I never had
any problems either. I often read reports like mine never thinking I
would resort to posting one---but take heed---there is a justifiable
cause.

Well... I made three more telephone calls today and I finally learned
that my order was shipped and presumed lost in the mail. I was told a
replacement order will be shipped Monday.

As best as I can determine Amidon has divided their operation into two parts serving business orders and personal or amateur orders. Why this is so is confusing---I was told at Amidon there was no difference in the orders that are placed.

Apparently, every time I called 714-850-4660 and inquired about a PERSONAL ORDER I was shuffled off to personal/amateur ordering---even though I asked for the individual who could help me with my order they could not transfer me to her because they are a separate operation NEXT DOOR (as I learned later)! Instead, I was hoplessly being transferred to other individuals with no capacity to help. It was my good fortune that I talked with a fellow in the WAREHOUSE who told me to call 714-850-7320. I did and I got another receptionist whereupon I was immediately transfered to the party I should have been talking to at the beginning of this week---twenty or so telephone calls ago---who resolved my problem in a matter of minutes.

I think the major factor in the problem I experienced is the NITWIT receptionist at 714-850-4660 who should have shown enough interest to direct me to their operation next door if I couldn't be transferred to the individual I needed to speak with. Oddly, my continued requests to speak with the one person who could help went ignored by her.

I think the operating structure of Amidon is seriously flawed---based upon my experience it is the epitome of poor business management. Unless they change their practices I will never, never, never place another order directly with Amidon but rather deal with their distributors instead.

3854. HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Bill Erwin <werwin@columbus.rr.com>
Message-ID: <n71T4.1095$0T2.48625@typhoon.columbus.rr.com>
Source record: 60659

A am interested in a HF transceiver (1K, or so, price range). I have been looking at the TS-570D and the IC-706MKIIG.
My main interests are CW and digital modes. But also enjoy a good SSB QSO. I would appreciate the views of anyone especially those that own either of these transceivers.
Thanks, Bill

3855. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <391ca9c9.125484864@news.azstarnet.com>
Source record: 60660
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

On 12 May 2000 18:41:38 GMT, glass2@glass2.lexington.ibm.com wrote:

>In <391C479A.ED335B9A@sfu.ca>, Kevin McQuiggin <mcquiggi@sfu.ca> writes:
>>Hi Folks:
>>
>>I've been licenced for 23 years, currently VE7ZD, and am in graduate
>>school up here near Vancouver, BC.
>>
>>I'm researching amateur radio and its history. I'm specifically
>>interested in inventions, discoveries, or techniques that were developed
>>within amateur radio and later spread to the electronics industry.
>>Similarly, some of our operating techniques and procedures were later
>>widely adopted by other services.

Marconi was an amateur.

N7WS

3856. Re: Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: kinsler@frognet.net
Message-ID: <oE3T4.448$fl4.916@newsfeed.slurp.net>
Source record: 60661
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

<jwg6@cornell.edu> wrote:
>What's the difference between cathode and plate current values? Which
>is more useful in properly loading-up an RF tube amp?
>
>Reason for this question is that I have an old Swan tcvr, and the meter
>reads cathode current, not plate current like I have seen on a lot of
>other rigs.

I can't imagine that it would make a lot of difference. The control grid
and the screen grid will account for a certain amount of current, but
you're looking for a minimum reading when you tune the tank circuit.
All of the grid currents come from the cathode, but I think they're far
less than the plate current.

>Would that cathode milliammeter be reading the current returning to the
>cathode (or B+ supply?) from the plate (across the load)? Or, would
>read the current _leaving_ the cathode through the tube, towards the
>positive plate?

Assuming a grounded cathode, it would be placed between the ground and the
cathode. It's a reasonable arrangement because the meter doesn't have to
operate at the high plate voltage and thus doesn't need to be heavily
insulated.

M Kinsler

--
.....
114 Columbia Ave. Athens, Ohio USA 45701 voice740.594.3737 fax740.592.3059
Home of the "How Things Work" engineering education program.
See http://www.frognet.net/~kinsler

3857. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fij6djbe1@plutonium.btinternet.com>
Source record: 60662

For VLF and ELF try ordinary steel power transformer laminations. Cut strips from large power transformer cores. Enquire at power transformer manufacturers. They may have scrap material. The thinner the laminations the better. What about the I's of E and I transformer laminations.
--
Regards, Reg.
==========
http://www.btinternet.com/~g4fgq.regp
==========
Wilbur <nospm@home.com> wrote in message news:3917F5F0.1B7@home.com...
> Anyone know why useable ferrite rods can't be homebrewed---anyone have
> experience making their own?
>
> I'd like experiment with rods .75" in diameter and 12" long or longer
> for VLF/HF but I sure don't want to pay the big money asked for
> them---some rods go for $100! I've heard of lab bench work where
> ferrite powder is mixed with epoxy then poured into molds. Although I
> haven't priced powder I suspect it's a small percentage of cost in the
> finished component.
>

3858. Re: HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: mundyusa1@netscape.net
Message-ID: <391fe621.6781998@news.usol.com>
Source record: 60663

On Fri, 12 May 2000 20:45:07 -0500, "john graesser" <graesser@tca.net>
wrote:

>
>Bill Erwin <werwin@columbus.rr.com> wrote in message
>news:n71T4.1095$0T2.48625@typhoon.columbus.rr.com...
>> A am interested in a HF transceiver (1K, or so, price range). I have been
>> looking at the TS-570D and the IC-706MKIIG.
>> My main interests are CW and digital modes. But also enjoy a good SSB QSO.
>I
>> would appreciate the views of anyone especially those that own either of
>> these transceivers.
>> Thanks, Bill
>>
>I can't speak for the 570 but I do have a 706mkIIG and unless you are
>interested in its capabiliites in going mobile and working vhf and uhf you
>would be better served going for a larger hf only rig. I considered the fact
>that I was getting a 6m, 2m and 70cm all mode just as important as getting
>another hf radio. Even with the front panel light turned off, mine runs warm
>to the touch, even when just sitting there on receive. The button interface
>requires either short or long presses on the buttons, so I wouldn't
>recommend it to anyone with any kind of shaky hand. It also took a little
>getting used to cycling around the menus and I wouldn't even try to do that
>mobile.
>I have mine feeding a tuner so I don't know how well it handles high swr.
>thanks, John.
>kc5dwd

The fan cycles off and on during receive only also, at least it does
on the 706MKII.

3859. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fihlfbkk1@uranium.btinternet.com>
Source record: 60664

An audio matching transformer from 50 to 5000 ohms will step up the
voltage by only 10 times.

In this day and age don't even think about winding 1000's of turns of
almost invisible wire on tiny mu-metal laminations. Just put an extra
transistor or 741 op-amp before or after the audio amplifier.

Yours Reg, G4FGQ
==========
<fretman_2@my-deja.com> wrote in message
news:8fhiemfun1@nnrp1.deja.com...
> I'll give the 50ohm resistor a try.
>
> It's not especially that I'm concerned about the DBDRM (double
balance
> diode ring mixer) seeing 50 ohms...I'm more concerned about the
level
> of the signals coming out of it. The CW signals that I'm after are
> very faint.
>
> Here's the setup....rf pre-amp & homebrew vfo into homebrew DBDRM
with
> audio into Radio Shack pocket amp...a direct conversion receiver I
> guess.
>
> Here's what I'm doing. Say I hear CW on 7.110 on my SW receiver. I
> tune my homebrew VFO to 7.100Mhz which is inturn injected into the
> DBDRM. The antenna jack of the DBDRM is connected to an RF preamp.
> The audio at the other end is heavily loaded with broadcast band
> stations and very little CW (I can copy the CW but the audio faint).
> Big SW stations boom when I tune across them and I have to cut back
on
> the drive of the VFO to stop the howl. I'm thinking the faint CW
audio
> may be the impedance mismatch but it may be another problem.
>
> If I terminate the 50ohm port on the DBDRM I'm still faced with
> transforming 50ohms to 5kohms.
>
>
> I'd like to get rid of the BCI but that's down on my list for right
> now. I'd like to get a better copy on the CW signals first.
>
> Thanks!

>
> Bill
> KD4PWB
>
>
> In article <8fgl3t$db4$1@plutonium.btinternet.com>,
> "Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> > You don't need a transformer. If the diode ring needs to be
> > terminated with 50 ohms for correct operation then just connect a
47
> > or 56 ohm resistor across it. But very likely there's no need.
> >
> > The amplifier could not care less what impedance is driving it.
Don't
> > listen to scary old wives' tales about impedance matching at such
> > points in the circuit.
> > --
> > Regards, Reg.
> > ================================
> > http://www.btinternet.com/~g4fgq.regp
> > ================================
> > <fretman_2@my-deja.com> wrote in message
> > news:8ff7bdtuc1@nnrp1.deja.com...
> > > I've build a diode ring double balance mixer...50 ohms at each
port.
> > I
> > > have a Radio Shack Pocket Amplifier that I'm using for audio
> > > amplification...5k ohms input. How can I build a xformer to
> > transform
> > > the 50ohms to 5k ohms audio???
> > >
> > > Thanks!
> > >
> > > Bill Harbour
> > > KD4PWB
> > >
> > >
> > > Sent via Deja.com http://www.deja.com/
> > > Before you buy.
> >
> >
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

3860. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <391c82eb.84490979@news.online.no>
Source record: 60665

On Wed, 26 Apr 2000 13:56:40 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>It is to be hoped your assembly and operating instructions have fewer
>errors than your advert. Or are you just pulling legs ?
>
seems to be a rather odd text proccessor dividing words randomly, or
just as you might intend

3861. Re: 2 Meter CW Transmitter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <391c8b5f.86655868@news.online.no>
Source record: 60666

On Fri, 12 May 2000 18:14:29 GMT, fretman_2@my-deja.com wrote:

>I don't have a reference handy....do General Class hams (USA) have
>priveldges from 144.000 to 144.100Mhz CW???
>
>Anyone got a circuit for a 2m CW transmitter??
>
>Bill
>KD4PWB
>
have lots of circuits, but isn't it much easier to convert a 2m PMR rig, they are available in large quantities here, and nobody want them

I've built several exciters, but later converted over a douzen 2m and 70cm FM PMR rigs to packet radio and 2m, 70cm and 23cm CW beacons

The problem with 'circuits' are that you also need a pcb, and constructional details, usually several pages of text with instructions. And every design need some special components, usually you won't be able to locate the coil formers required.

Converting xtal controlled PMR's you just remove all modulation stages, put some extra electrolytics on Vcc+ line to various power amplifier stages to avoid spurious emissions, and it is often experienced that the xtal oscillator is too noisy so at better approach might be needed

The PMR usually have some better selectivity against unwanted radiation of subharmonics from oscillator, amateurs very often don't seem to care, but you soon have a problem when Radio inspection has visited you after a TVI complaint at your neighbours. They've been here several times, although I only have 200W CW into a 17 el Tonna yagi.

I made a special modulator for keying some very high speed beacons with low key-clicks, it consists of two transistors, looks like amplitude modulator

73
jan-martin
LA8AK

3862. A way to make the Yaesu FT50 a repeater ?(simplex/parrot)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: yo2llq <doiNOdoSPAM@internetcafe.ro.invalid>
Message-ID: <0704bbe1.7daa5ac0@usw-ex0109-068.remarq.com>
Source record: 60667

Hi there

Since the FT50 can't do crossband repeat(for design reasons
it just can't), there could be something to compensate
this... Like you could turn it into a simplex repeater(with
the aid of the FTT-12 keypad).
If you know a mod or something to turn the FT50 into a
parrot pse let me also know this.

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

3863. Re: Can You ID this tube?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Robin G3LBA <robin@g3lba.freeserve.co.uk>
Message-ID: <8fjfu0$ah5$1@news7.svr.pol.co.uk>
Source record: 60668

They were used for Air Ground VHF voice TX in WWII. They made loads of them.
"Mr. Wires" <NOSPAMwires@bigfoot.com> wrote in message
news:391C575A.4AC452B2@bigfoot.com...
> Can anyone identify what kind of tube this is & what it was used for?
>
> It's marked "JAN-CIM-15E", & carries the "Eimac" brand. Markings
> (ratings?) stamped on one side of the box read:
>
> Ep = 1000 v
>
> Ip = 0.5 ma
>
> Eg = "46" is written in pencil here
>
> "Peak a - 46" is also written in pencil at the top of all these
> markings.
>
>
> I have posted pictures of the tube & box at:
>
> http://members.xoom.com/_XMCM/studio_tech/tube.html
>
>
> I am guessing that this is some kind of transmitter tube.
> I have a number of these NIB. Are these only good for
> target practice?! (I found them at a garage sale).
>
>
> Thanks,
>
> Mr. Wires (post here or delete "NOSPAM" to e-mail)

3864. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Wilbur <nospm@home.com>
Message-ID: <391D3587.29A6@home.com>
Source record: 60669

Reg Edwards wrote:
>
> For VLF and ELF try ordinary steel power transformer laminations. Cut
> strips from large power transformer cores. Enquire at power
> transformer manufacturers. They may have scrap material. The thinner
> the laminations the better. What about the I's of E and I transformer
> laminations.
> --
> Regards, Reg.
> ================================
> http://www.btinternet.com/~g4fgq.regp
> ================================
> Wilbur <nospm@home.com> wrote in message news:3917F5F0.1B7@home.com...
> > Anyone know why useable ferrite rods can't be homebrewed---anyone
> have
> > experience making their own?
> >
> > I'd like experiment with rods .75" in diameter and 12" long or
> longer
> > for VLF/HF but I sure don't want to pay the big money asked for
> > them---some rods go for $100! I've heard of lab bench work where
> > ferrite powder is mixed with epoxy then poured into molds. Although
> I
> > haven't priced powder I suspect it's a small percentage of cost in
> the
> > finished component.
> >

Thanks Reg... OK on E & I cores... What I want to know is homebrewing ferrite rods of large diameter and length using epoxy and bulk powder. I was told of short lab trials doing it for evaluation purposes but I don't know what the tradeoff's are nor the results compared to rods manufactured utilizing conventional techniques---I suspect decreases in permeability. My references don't contain any manufacturing information.

3865. Help with MFJ-1278 and Kenwood TMV7

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Pedro Braz <pqp@netcabo.pt>
Message-ID: <8fjfpsjfu7@duke.telepac.pt>
Source record: 60670

Hello,

I have a MFJ-1278 and a Kenwood TM-V7 and need to connect them both.

The MFJ 1278 Pin out is as follows:

PIN 1 - MIC. AUDIO
PIN 2 - GND
PIN 3 - PTT
PIN 4 - REC. AUDIO
PIN 5 - SQUELCH INPUT

The TMV7 Pin out is as follows:

PIN 1 - Packet data input(PKD) (TX data from TNC to transceiver)
PIN 2 - GND for PKD
PIN 3 - Packet Standy - TNC can use this pin to inhibt the transceiver microphone input while txing packet signals
PIN 4 - OUput of detected 9600 bps date 500mVp-p 10Kohm
PIN 5 - Same but for 1200bps (500mVp-p 10Kohm)
PIN 6 - Squelch Control output (Inhibts TNC data txing while transceiver squelch is open, Prevents interference to voice comms over the same freq. Output leve: Open Squelch +5 V high Close Squelch 0V Low.

They say the 9600 pin should be used when there is only one PIN coming out of the TNC for the data.

The idea I have of connecting them is:

MFJ TMV7
PIN 1 ---- PIN 1
PIN 2 ---- PIN 2
PIN 3 ---- PIN 3
PIN 4 ---- PIN 4
PIN 5 ---- PIN 6

IS ot ok? Should I do it another way???

I really need help.

73's and thx all

Pedro Braz - CT1FQD
pqp@netcabo.pt

3866. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fjj7o$k5r$1@nnrp1.deja.com>
Source record: 60671

I'll give the 741 op amp a try. I've got several 741's in my junk box
and I can put together an amp pretty quick.

I did put the 50 ohm resistor across the terminals and that did help.
I noticed too that when everything runs off of battery that I get much
less noise. I was able to copy CW at 7.040Mhz very plainly. The BCI
went down too on 40m but seemed worse at 10.106Mhz.

Thanks for the reply Reg!!

73,

Bill
KD4PWB

In article <8fihlfbkk1@uranium.btinternet.com>,
"Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> An audio matching transformer from 50 to 5000 ohms will step up the
> voltage by only 10 times.
>
> In this day and age don't even think about winding 1000's of turns of
> almost invisible wire on tiny mu-metal laminations. Just put an extra
> transistor or 741 op-amp before or after the audio amplifier.
> ---
> Yours Reg, G4FGQ
> ================================
> <fretman_2@my-deja.com> wrote in message
> news:8fhiemfun1@nnrp1.deja.com...
> > I'll give the 50ohm resistor a try.
> >
> > It's not especially that I'm concerned about the DBDRM (double
> balance
> > diode ring mixer) seeing 50 ohms...I'm more concerned about the
> level
> > of the signals coming out of it. The CW signals that I'm after are
> > very faint.
> >
> > Here's the setup....rf pre-amp & homebrew vfo into homebrew DBDRM
> with
> > audio into Radio Shack pocket amp...a direct conversion receiver I
> > guess.
> >
> > Here's what I'm doing. Say I hear CW on 7.110 on my SW receiver. I
> > tune my homebrew VFO to 7.100Mhz which is inturn injected into the
> > DBDRM. The antenna jack of the DBDRM is connected to an RF preamp.
> > The audio at the other end is heavily loaded with broadcast band

> > stations and very little CW (I can copy the CW but the audio faint).
> > Big SW stations boom when I tune across them and I have to cut back
> on
> > the drive of the VFO to stop the howl. I'm thinking the faint CW
> audio
> > may be the impedance mismatch but it may be another problem.
> >
> > If I terminate the 50ohm port on the DBDRM I'm still faced with
> > transforming 50ohms to 5kohms.
> >
> >
> > I'd like to get rid of the BCI but that's down on my list for right
> > now. I'd like to get a better copy on the CW signals first.
> >
> > Thanks!
> >
> > Bill
> > KD4PWB
> >
> >
> > In article <8fgl3t$db4$1@plutonium.btinternet.com>,
> > "Reg Edwards" <g4fgq.regp@btinternet.com> wrote:
> > > You don't need a transformer. If the diode ring needs to be
> > > terminated with 50 ohms for correct operation then just connect a
> 47
> > > or 56 ohm resistor across it. But very likely there's no need.
> > >
> > > The amplifier could not care less what impedance is driving it.
> Don't
> > > listen to scary old wives' tales about impedance matching at such
> > > points in the circuit.
> > > --
> > > Regards, Reg.
> > > ================================
> > > http://www.btinternet.com/~g4fgq.regp
> > > ================================
> > > <fretman_2@my-deja.com> wrote in message
> > > news:8ff7bdtuc1@nnrp1.deja.com...
> > > > I've build a diode ring double balance mixer...50 ohms at each
> port.
> > > I
> > > > have a Radio Shack Pocket Amplifier that I'm using for audio
> > > > amplification...5k ohms input. How can I build a xformer to
> > > transform
> > > > the 50ohms to 5k ohms audio???
> > > >
> > > > Thanks!
> > > >
> > > > Bill Harbour
> > > > KD4PWB

> > > >
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> > Before you buy.
>
>

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Before you buy.

3867. Biconical Monopoles, details sought.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Dean <haeuNOhaSPAM@datafast.net.au.invalid>
Message-ID: <0e7aa180.7aabebde@usw-ex0108-062.remarq.com>
Source record: 60672

I am currently conducting experiments with broadband HF
biconical monopoles, but am finding it very difficult to
locate any specific details for this design. If anybody is
able to supply any specifications or details, or suggest
where I may be able to find such I would be most grateful.

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

3868. Re: HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: goldreged@aol.comJUNKBLOK
Message-ID: <20000513094324.24905.00002469@ng-cc1.aol.com>
Source record: 60673

<<A am interested in a HF transceiver (1K, or so, price range). I have been looking at the TS-570D and the IC-706MKIIG.
My main interests are CW and digital modes. But also enjoy a good SSB QSO. I would appreciate the views of anyone especially those that own either of these transceivers.>>

I own the 706 MK II & LOVE it...
Ed G.
KB1DQX
(Please Remove "JUNKBLOK" to E-mail.
Unless it's a Flame.)

3869. Re: HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <Y7dT4.21054$sB3.8171@news.indigo.ie>
Source record: 60674

>A am interested in a HF transceiver (1K, or so, price range). I have been
>looking at the TS-570D and the IC-706MKIIG.

The best way to get the rig you want, is to build it yourself.
You get the features you want, you don't have to buy the features
you don't need.

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3870. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <OjdT4.16731$X91.103848@news02>
Source record: 60675

I have not been involved with anybody manufacturing ferrite products for a while so this may be out of date. Bulk powers are mixed in various ratios with binder matterial and then pressed into shape with a fairly large press. The result is cooked (fired) to turn it into a solid.

The key is that what you buy as a core is powder plus binder. To get the raw powder I would guess you have to order a couple hundred pounds of the stuff ... not cheap at all. If you just grind up a core you have powder plus binder. If you add epoxy to the binder then you get less net power per unit volume. Permiability would go down and may go down a lot. About the only way to find out is to grind up some cores and see what happens.

If I was going to do it I'd buy the biggest RFI cores Digikey sells, glue them together to get a 12 inch length and then put the epoxy plus ground cores down the middle of the assembly. That way most of the cross section is the real thing and only the center is homebrew.

Enjoy

Bob
KB8TQ

3871. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <FidT4.2436$yY1.75002@news.inreach.com>
Source record: 60676

Do you have a spell checker?

3872. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <8gaqhssug5no524u5507bi4r9vsn10bmil@4ax.com>
Source record: 60677

On Sat, 13 May 2000 04:04:38 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>An audio matching transformer from 50 to 5000 ohms will step up the
>voltage by only 10 times.

A 10 times voltage step up is 20 dB and this case the performance of
the receiver is more or less dictated by the internal noise of the
audio amplifier, thus, not using the transformer will degrade the
signal to noise ratio by nearly 20 dB, not an insignificant number
even at lower HF, even though the background noise is still pretty
high.

>In this day and age don't even think about winding 1000's of turns of
>almost invisible wire on tiny mu-metal laminations. Just put an extra
>transistor or 741 op-amp before or after the audio amplifier.

Sure you can connect two 741's in series, each with a voltage gain of
100, but the output will be saturated with the noise from the first
amplifier, even without anything connected to the input.

The point is that you should use as much of the available signal power
as possible, thus, the amplification in the audio amplifier can be
reduced, reducing the internally generated noise contribution to the
output signal.

Paul OH3LWR

3873. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <%CeT4.16984$X91.104759@news02>
Source record: 60678

"Russ.Shaw" <russell@webaxs.net> wrote in message
news:391D6581.D358DB22@webaxs.net...
> Even if the u of the rod changed from 500 to 5000, i doubt it would
> make much of a change to a rod inductor, as most of the path is thru
> air anyways...
>

My concern is that the permeability with the epoxy may drop from 5,000 to about 50 or so.

Rod antennas are weird. The permeability of the core does make a difference up to a point. The only reference I have quickly at hand is the ARRL Antenna 18th edition. Page 5-7 shows a figure 12 that describes the relationship between rod permeability and core permeability. For a 10:1 length to diameter ratio you get very little benefit going from a core 1000 to a core 10,000 material. At the same length to diameter ratio the change from 100 to 1000 still gives some improvement in the inductor. If you go to a 100:1 length to diameter ratio then materials with permeability of 10,000 or so still give you some benefit.

The references they cite in the bibliography are by Polydorff and Snelling. I don't know if their stuff is any easier to find than an ARRL publication.

Time to do an experiment and see what happens ....

Enjoy!

Bob

KB8TQ

3874. Re: Chip id Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Reg <reg@lakeside0.free-online.co.uk>
Message-ID: <RFeT4.388$I5.15672@stones>
Source record: 60679
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Many Thanks again.
I have just replaced the chip and everything is working great :)

73
cheers

Reg

3875. Re: Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Dale Parfitt <parinc@bellsouth.net>
Message-ID: <391D774B.922C160@bellsouth.net>
Source record: 60680
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

JGinNY wrote:

> What's the difference between cathode and plate current values? Which
> is more useful in properly loading-up an RF tube amp?
>
> Reason for this question is that I have an old Swan tcvr, and the meter
> reads cathode current, not plate current like I have seen on a lot of
> other rigs.
>
> Would that cathode milliammeter be reading the current returning to the
> cathode (or B+ supply?) from the plate (across the load)? Or, would
> read the current _leaving_ the cathode through the tube, towards the
> positive plate?
>
> The older radio handbooks I have don't mention "cathode current," per
> se; only plate current. What's the scoop?
>
> mni tks!
> jg

Cathode current= Plate+ grid(s) current

3876. 813 Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <391d7992$0$35182@news.voyager.net>
Source record: 60681

I have some 813 tubes that I am either going to sell or trade.I would be more interested in trading,what do you have?? Rob P.S. these are not new!

3877. Links to UHF design pages

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Mika Koistinen <m.koistinen@kolumbus.fi>
Message-ID: <8fjtshsnm1@news.kolumbus.fi>
Source record: 60682

Hello,
I need help in receiver design (70 cm).
Thanks,
Mika

3878. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: hamm4fun@aol.com
Message-ID: <20000513122349.14583.00005376@ng-ch1.aol.com>
Source record: 60683

>>An audio matching transformer from 50 to 5000 ohms will step up the
>>voltage by only 10 times.
>
>A 10 times voltage step up is 20 dB and this case the performance of
>the receiver is more or less dictated by the internal noise of the
>audio amplifier, thus, not using the transformer will degrade the
>signal to noise ratio by nearly 20 dB, not an insignificant number
>even at lower HF, even though the background noise is still pretty
>high.
>
>
>>In this day and age don't even think about winding 1000's of turns of
>>almost invisible wire on tiny mu-metal laminations. Just put an extra
>>transistor or 741 op-amp before or after the audio amplifier.
>
>Sure you can connect two 741's in series, each with a voltage gain of
>100, but the output will be saturated with the noise from the first
>amplifier, even without anything connected to the input.
>
>The point is that you should use as much of the available signal power
>as possible, thus, the amplification in the audio amplifier can be
>reduced, reducing the internally generated noise contribution to the
>output signal.
>
>Paul OH3LWR
>
>
>
>
>
>
>
>
>

Right you are Paul. The 741 will contribute about 5 millivolts of noise which will be amplified by the next stage. The poster had the right idea to start with. Instead of looking for a 50 to 5k transformer he should be looking for about anything with this ratio. Even a mic 10k to 600 ohm transformer would help a lot. If amplify he must I would go with a single FET per stage instaed of the op amp. They are a lot less noisy. Of course there are less noisy opamps than the 741.

3879. Re: Cathode current?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <bQfT4.81505$MB.1651295@news6.giganews.com>
Source record: 60684
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.basics

For tetrodes and pentodes, the cathode current is greater than the plate current because of the screen current being added in. The control grid current is a factor also.

So figuring out the plate power input is a bit more difficult. The easiest thing to do, if that's what you want, is to estimate the difference from looking at tube data.

It's common to measure cathode current instead of plate current because that allows one side of the meter to be at or near ground potential. If the meter were in the high voltage circuit, it might create a safety or arcover hazard. I remember in the old days one would mount the plate current meter in an insulated fashion to avoid problems. It would, of course, look different that way. And it was downright dangerous to stick a screwdriver in to adjust the meter zero!

73, Bob K6DDX

3880. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: AMDX <AMDX@worldnet.att.net>
Message-ID: <t_gT4.64284$fV.3935133@bgtnsc05-news.ops.worldnet.att.net>
Source record: 60685

Hi all,

Ok, I have 42---3B7-3622 pot cores stacked, it is 18 inches long and 1
3/8"dia.
What can I learn about it as loop antenna and how should I go about it? I
have a
scope, and signal generator.
I don't think the material is to good over 400 or 500Khz.

--
Mike Knowlton
Panama City Fl.

3881. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Dan/W4NTI <w4nti@my-deja.com>
Message-ID: <8fk821$9pr$1@nnrp1.deja.com>
Source record: 60686
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

In article <391C479A.ED335B9A@sfu.ca>,
Kevin McQuiggin <mcquiggi@sfu.ca> wrote:
> Hi Folks:
>
> I've been licenced for 23 years, currently VE7ZD, and am in graduate
> school up here near Vancouver, BC.
>
> I'm researching amateur radio and its history. I'm specifically
> interested in inventions, discoveries, or techniques that were
developed
> within amateur radio and later spread to the electronics industry.
> Similarly, some of our operating techniques and procedures were later
> widely adopted by other services.
>
> Hams operate outside of the structured environments within industry,
and
> I think that this freedom has permitted us to invent and discover
> without being shackled by any policy issues, or possible stigmatism
from
> investigating things that would be considered "too far out in left
> field" by management and non-ham co-workers.
>
> Examples would be the investigation of wavelengths below 200 meters,
> with the discovery by hams that such wavelengths were better for
> propagation than longer waves; packet radio; APRS; propagation studies
> that were undertaken in the 20s and 30s; facsimile; SSTV; and network
> operating techniques.
>
> Some of this stuff was regulated, such as the banishment of amateur
> radio to the "useless" wavelengths < 200 M, but this sort of proves my
> point. There's been lots of innovation within the hobby, and the
general
> public now benefits from it.
>
> If anyone could provide me with more examples, or good books or
articles
> on this topic, then that'd be great. Of course I'll give appropriate
> credit to those who assist!
>
> If you could email me as well as posting your reply, thanks. There's
> lots of traffic in these groups and I don't want to miss any replies.
>
> 73,

>
> Kevin VE7ZD
> mcquiggi@sfu.ca
>
>
Go to www.hrshowcase.com and select the series of "wayback"
articles. You will find some really good info there on your subject.

Dan/W4NTI

--
"Just tellin the truth, and they cain't stand it."

Sent via Deja.com http://www.deja.com/
Before you buy.

3882. SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <391DC628.5ACA38BF@sympatico.ca>
Source record: 60687

Regards! I am a radio ham which is kind of "disconnected" I have not
been active for many years but I still have my license! I am an
engineering consultant in radio frequency and now that I am retired, I
am interested in the technology used for radio amateur.
My question! Does anybody know if cuircuits exist to automatically
generate the BFO frequency (Carrier Regeneration) for SSB detection in a
multiplier (or product detector); has any researcher tried to do that?
With today's synthesizers, is it possible to generate the IF frequency
with enough precision so that the SSB carrier regeneration (BFO) is
close enough for the audio to be comprehensible. Is automatic control of
the BFO a desired objective. How many hertz must the BFO be from the
suppressed carrier for intelligible audio? Thanks!
VE2AUC

3883. If output on TS440s

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Martin John Hallsworth <Martin@g1gyc.demon.co.uk>
Message-ID: <958257794.29157.0.nnrp-06.9e98acde@news.demon.co.uk>
Source record: 60688
Cross-posted to:
alt.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

Hello,
I am wanting to use the SM220 + panadapter with my TS440 but it has no
IF output. Has any one made a mod to give if out on this rig ?
any helpful details appreciated.

also what is the bandwidth of the 45.05Mhz 1st if filter ?

Thanks Martin

3884. tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: fred-palmer <fred-palmer@email.msn.com>
Message-ID: <Oi#B#rTv$GA.232@cpmsnbbsa03>
Source record: 60689
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap,sbay.hams

Need a 6AL5 and a 12AU7 to finish restoring a Johnson Viking. Would like Dallas area but would pay for shipping if tube prices are reasonable. I added that' cause from what I've read, the prices are going out of sight and it wasn't too long ago that I had to give away 3 large bin boxes full. thinking I would never need them again!) Fred 940-321-2029 or fred-palmer@msn.com

3885. Re: If output on TS440s

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <391E0647.F686B923@oio.net>
Source record: 60690
Cross-posted to:
alt.radio.amateur,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,uk.radio.amateur

```
Martin,
Good luck! There's no easy way to do that without
quite a bit of circuit modification. The 45Mhz filter
is a 2.7 Mhz.
'Doc
```

3886. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <391E066F.C2F66F90@nettally.com>
Source record: 60691

I am a relativly new ham. I concentrate my operations from 50 MHz through 1.2 GHz. I have not had a lot of experience with older BFO type receivers. In my experience with modern synthesized receivers (Mostly ICOM), the synthesized VFO circuitry and product detectors are pretty much dead on and stable. Where I see improvement needed is in the area of Doppler correction when working satellites. I saw a recent article (QEX magazine?) about some software that worked with a computer sound card and was effective in automatically tuning and regenerating a clean SSB signal. If someone develops a receiver that can accomplish this quickly and repeatably in the DSP, it would be pretty attractive to those working the LEO satellites. It would be even more terrific if Timewave* or NIR would develop an aftermarket DSP that could do this. In my experience, being 50 or 100 HZ off frequency unacceptably reduces the intelligibility.

* How about it Timewave, a flash upgrade for the 599zx?

jos wrote:

> Regards! I am a radio ham which is kind of "disconnected" I have not
> been active for many years but I still have my license! I am an
> engineering consultant in radio frequency and now that I am retired, I
> am interested in the technology used for radio amateur.
> My question! Does anybody know if cuircuits exist to automatically
> generate the BFO frequency (Carrier Regeneration) for SSB detection in a
> multiplier (or product detector); has any researcher tried to do that?
> With today's synthesizers, is it possible to generate the IF frequency
> with enough precision so that the SSB carrier regeneration (BFO) is
> close enough for the audio to be comprehensible. Is automatic control of
> the BFO a desired objective. How many hertz must the BFO be from the
> suppressed carrier for intelligible audio? Thanks!
> VE2AUC

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come

at you rapidly.

3887. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fjqfk$8eo$1@uranium.btinternet.com>
Source record: 60692

Wilbur, there's no doubt about it - any powdered form of magnetic material mixed with an insulating, non-magnetuc binder will have an extemely reduced effective permeability.

For example, solid iron has a permeability of the order 1000 or more. But when incorporated in iron-dust low-loss cores and toroids the permeability is reduced to 8 or 10. See the toroid manufacturer's data. With such a low permeabiliy rod you would be better off with a wooden dowel about four times the diameter.

I havn't done any calculations at LF but I would judge a 2 or 3-feet square, multi-turn loop or frame antenna, would be more sensitive and efficient than a solid ferrite rod antenna of the size you have in mind. Takes up a much larger volume of space, of course, but costs next to nothing.

Wouldn't take long to knock together an experimental square wooden-frame LF / VLF antenna. A twin-gang or 4-gang 500pF variable capacitor would be useful. Program RJELOOP3, available free from my website, will calculate the number of turns to wind on a given size frame, to resonate at a given frequency with a given value of tuning capacitor.
--
Regards, Reg.
==========
Free radio design software available from : -
http://www.btinternet.com/~g4fgq.regp
==========
Wilbur <nospm@home.com> wrote in message
news:391D3587.29A6@home.com...
> Reg Edwards wrote:
> >
> > For VLF and ELF try ordinary steel power transformer laminations.
Cut
> > strips from large power transformer cores. Enquire at power
> > transformer manufacturers. They may have scrap material. The
thinner
> > the laminations the better. What about the I's of E and I
transformer
> > laminations.
> > --
> > Regards, Reg.
> > ==========
> > http://www.btinternet.com/~g4fgq.regp
> > ==========

> > Wilbur <nospm@home.com> wrote in message
news:3917F5F0.1B7@home.com...
> > > Anyone know why useable ferrite rods can't be
homebrewed---anyone
> > have
> > > experience making their own?
> > >
> > > I'd like experiment with rods .75" in diameter and 12" long or
> > longer
> > > for VLF/HF but I sure don't want to pay the big money asked for
> > > them---some rods go for $100! I've heard of lab bench work
where
> > > ferrite powder is mixed with epoxy then poured into molds.
Although
> > I
> > > haven't priced powder I suspect it's a small percentage of cost
in
> > the
> > > finished component.
> > >
>
> Thanks Reg... OK on E & I cores... What I want to know is
homebrewing
> ferrite rods of large diameter and length using epoxy and bulk
powder.
> I was told of short lab trials doing it for evaluation purposes but
I
> don't know what the tradeoff's are nor the results compared to rods
> manufactured utilizing conventional techniques---I suspect decreases
in
> permeability. My references don't contain any manufacturing
> information.
>

3888. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-13 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fk3b1$qd0$1@neptunium.btinternet.com>
Source record: 60693

At 7 MHz the internal noise of an ordinary receiver is many dB below
the normal band noise.

So signal to noise ratio is determined by what is collected by the
antenna. Little can be done to improve matters except by increasing
antenna directivity and using a rotary beam.

The problem you describe cannot arise at 7 MHz. It is something to
consider at 145 MHz and certainly at 1 GHz.

It is a simple matter to check. Peak up the tuning on your receiver in
between signals and LISTEN only to background noise which is usually
very long distance static + local clicks and pops. Then disconnect the
antenna from the receiver input. If you like, terminate the receiver
input with 50 ohms.

If after disconnection there's a noticeable reduction in noise in the
speaker, despite the agc doing its best to keep it constant, then
there's nothing at all to worry about.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
Paul Keinanen <keinanen@sci.fi> wrote in message
news:8gaqhssug5no524u5507bi4r9vsn10bmil@4ax.com...
> On Sat, 13 May 2000 04:04:38 +0100, "Reg Edwards"
> <G4fgq.Regp@btinternet.com> wrote:
>
> >An audio matching transformer from 50 to 5000 ohms will step up the
> >voltage by only 10 times.
>
> A 10 times voltage step up is 20 dB and this case the performance of
> the receiver is more or less dictated by the internal noise of the
> audio amplifier, thus, not using the transformer will degrade the
> signal to noise ratio by nearly 20 dB, not an insignificant number
> even at lower HF, even though the background noise is still pretty
> high.
>
>
> >In this day and age don't even think about winding 1000's of turns
of
> >almost invisible wire on tiny mu-metal laminations. Just put an
extra

> >transistor or 741 op-amp before or after the audio amplifier.
>
> Sure you can connect two 741's in series, each with a voltage gain
of
> 100, but the output will be saturated with the noise from the first
> amplifier, even without anything connected to the input.
>
> The point is that you should use as much of the available signal
power
> as possible, thus, the amplification in the audio amplifier can be
> reduced, reducing the internally generated noise contribution to the
> output signal.
>
> Paul OH3LWR
>
>

3889. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <391D6581.D358DB22@webaxs.net>
Source record: 60545

Even if the u of the rod changed from 500 to 5000, i doubt it would
make much of a change to a rod inductor, as most of the path is thru
air anyways...

Bob Camp wrote:
>
> I have not been involved with anybody manufacturing ferrite products
> for a while so this may be out of date. Bulk powers are mixed in
> various ratios with binder matterial and then pressed into shape with
> a fairly large press. The result is cooked (fired) to turn it into a
> solid.
>
> The key is that what you buy as a core is powder plus binder. To get
> the raw powder I would guess you have to order a couple hundred pounds
> of the stuff ... not cheap at all. If you just grind up a core you
> have powder plus binder. If you add epoxy to the binder then you get
> less net power per unit volume. Permiability would go down and may go
> down a lot. About the only way to find out is to grind up some cores
> and see what happens.
>
> If I was going to do it I'd buy the biggest RFI cores Digikey sells,
> glue them together to get a 12 inch length and then put the epoxy plus
> ground cores down the middle of the assembly. That way most of the
> cross section is the real thing and only the center is homebrew.
>
> Enjoy
>
> Bob
> KB8TQ

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3890. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <j2jshsghvicnkasih80cmcf4vugg3gdciq@4ax.com>
Source record: 60546

On Sat, 13 May 2000 18:17:07 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>At 7 MHz the internal noise of an ordinary receiver is many dB below
>the normal band noise.

"Ordinary" HF receivers have noise figures in the order of 10 .. 20 dB
without a preamplifier and the band noise at 7 MHz are 40 .. 60 dB
over thermal noise, depending on location and time of day and year. So
indeed, the reception is band noise limited.

However, consider a direct conversion receiver with a diode ring mixer
having a -6 dB gain (actually conversion loss) followed by an audio
amplifier with a noise figure of 10 dB (which may be typical for
amplifiers not designed with low noise as the primary goal). Due to
the loss in the mixer, the total noise figure would be 16 dB, quite
sufficient for 7 MHz. However, in direct conversion receivers, the
output is nearly DC and some mixers generate a strong 1/f noise, so
according to some articles in QST, the SBL-1 type mixer will exhibit
17 dB noise figures at audio frequencies, thus the total noise figure
is determined by the mixer noise figure alone.

Now, insert a 20 dB attenuator between the mixer and audio amplifier,
the combined noise figure will be -(-6 dB -20 dB)+10 dB or 36 dB,
which is close to the band noise for quiet locations. In this case the
mixer 1/f noise is much less than the combined noise figure of the
attenuator and audio amplifier and thus it is not included in the
calculation.

Terminating the mixer with a 50 ohm resistor and feeding the signal
into an amplifier with 5 kOhm input impedance has the same effect as
inserting a 20 dB attenuator between matched components.

>So signal to noise ratio is determined by what is collected by the
>antenna. Little can be done to improve matters except by increasing
>antenna directivity and using a rotary beam.
>
>The problem you describe cannot arise at 7 MHz.

This is not a problem with a full sized dipole in urban areas, where
the band noise is very high, but can be significant in quiet rural
locations, especially if the antenna (and antenna tuner) is lossy,
which is often the case in portable operations.

>It is something to consider at 145 MHz and certainly at 1 GHz.

For 145 MHz I have usually seen noise values of 0 .. 10 dB over thermal noise quoted. For 1 GHz much lower values are quoted when the antenna is pointing at the "cold" sky.

>It is a simple matter to check. Peak up the tuning on your receiver in
>between signals and LISTEN only to background noise which is usually
>very long distance static + local clicks and pops. Then disconnect the
>antenna from the receiver input. If you like, terminate the receiver
>input with 50 ohms.
>
>If after disconnection there's a noticeable reduction in noise in the
>speaker, despite the agc doing its best to keep it constant, then
>there's nothing at all to worry about.

Then repeat the experiment with all preamplifiers off and a 20 .. 30 dB antenna attenuator inserted between the antenna and receiver. This will much closely match the situation with mismatched audio amplifier.

Paul OH3LWR

3891. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <391d0e6f.120212715@news.online.no>
Source record: 60547
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

On Fri, 12 May 2000 20:16:28 -0700, Dave
<dlawryNOdlSPAM@norfolk-county.com.invalid> wrote:

>There are the tradeoffs. Higher If and image rejection. How about
>going to 10.7 mhz with a ceramic filter for image rejection and then
>down to 455 for the final sideband filtering?
>
>
you probably need two filter stages and a 10.7MHz IF amplifier or two
for sufficient ultimate rejection

3892. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <391d0fdf.120580548@news.online.no>
Source record: 60548
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

On Mon, 01 May 2000 11:00:28 +1000, "Russ.Shaw" <russell@webaxs.net>
wrote:

>I wanted to make the if strip using standard 455kHz if-transformers,
>and more gain with fewer stages can be got at lower frequencies. I
>can get 35-40dB gain from a BC548 transistor at 1mA using transformers,
>and they're easier to get and have a nicer agc characteristic than ics
>i know of.
>
BF199 is better for tuned stages considering stability

3893. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: wd1v@amsat.org
Message-ID: <wd1v-1405000615580001@wdonev.ne.mediaone.net>
Source record: 60549
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

The first amateur was Marconi in the history books but you
might want to check out Braun, Tesla, and a few others.

"Marconi shared his Nobel prize with German physicist Karl Ferdinand Braun, b. June 6,
1850, d.Apr. 20, 1918, in 1909 Nobel Prize for physics with
Guglielmo Marconi for his work in developing the radio.

Braun, who spent his career as a professor of physics at
German universities, increased the range of Marconi's
transmitter, invented the crystal rectifier (a device that
allows current to flow in only one direction, and improves
radio transmission), and later invented the oscilloscope, a
cathode-ray-tube laboratory device that was the forerunner of
today's television and radar tubes."

Source: The New Grolier Multimedia Encyclopedia

Another great innovation that hams brought to the party
was helping people in times of distress - for FREE! Ironic
that a group of people known for "intense thrift" would give away
life saving services at their own costs - sometimes putting their
own lives at great risk too - and expect nothing in return!

Good luck with your thesis - please post it when done so we
can all enjoy it.

73!

John D. Seney
http://www.qsl.net/wd1v/
Macnet, Amateur Radio FAQ, Oscilloscope FAQ

3894. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <391E80C2.BC08DDBB@eznec.com>
Source record: 60550

It sounds like you have the same problem I did years ago when building direct conversion receivers. I ended up with a common-base stage between the DBM and the main audio amplifier. The problem isn't so much matching the input impedance of the amplifier as it is putting the output from the DBM into a matched load that won't waste the signal and trash the noise figure. The common-base stage is biased at about 0.5 mA so you see about 50 ohms looking into the emitter. The collector and base voltages were derived from an "active decoupler" -- an emitter follower with well-filtered input -- to provide a very low noise source of voltage. This arrangement was first published in "An Optimized QRP Transceiver", in August 1980 QST, and was used in Hayward & Hayward's "Ugly Weekender" receiver in August 1981 QST, also by Rick Campbell in his R2 series of direct conversion receivers. One or another of these rigs have been in various editions of the ARRL Handbook over the years. I made a lot of noise figure measurements, and it came out quite respectable although I don't recall the value offhand after all these years. One thing -- If you do find the original article, don't use the 2N3565 I recommended. I later found out that its noise figure was terrible at that current, and that an ordinary 2N3904 and a number of other common transistors were much better.

Roy Lewallen, W7EL

fretman_2@my-deja.com wrote:
>
> I've build a diode ring double balance mixer...50 ohms at each port. I
> have a Radio Shack Pocket Amplifier that I'm using for audio
> amplification...5k ohms input. How can I build a xformer to transform
> the 50ohms to 5k ohms audio???
>
> Thanks!
>
> Bill Harbour
> KD4PWB

3895. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fkq93njg1@uranium.btinternet.com>
Source record: 60551

For telephone speech quality reception, such as amateur SSB, the carrier should be re-injected within +/- 10 Hz, preferably +/- 5Hz. This requires a very long and short-term stable local master oscillator.

For broadcast quality and especially music it must be much better - within +/- 0.25Hz or better.
--
Regards, Reg.

3896. GE MASTR II

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: jmull1997@aol.com
Message-ID: <20000514090713.05659.00002580@ng-co1.aol.com>
Source record: 60552

Got the radio tuned up tp six meters and now it does not have any audio at all....The radio is receiving the signal but that is it...Got any idea in what to do next. Thanks

3897. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: kelly@dvol.com
Message-ID: <391ea285.135691052@news.dvol.com>
Source record: 60553
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

On Fri, 12 May 2000 20:08:47 GMT, blackm00@cam.org (Michael Black)
wrote:
>
>once wrote an article about "How to be an Amateur" pointing out
>some of the benefits hams have to innovate for the simple reason
>that they aren't bound by corporations. I think it was published
>in an early issue of 73, and then reprinted once or twice. 1971
>comes to mind.
>
> Micahel VE2BVW
>
Nice post.
>
w3rv

3898. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fmbjh$e3l$1@nnrp1.deja.com>
Source record: 60554

Thanks Roy for the advice. I did put a 50 ohm resistor across the terminals of the audio port and it helped considerably!! The noise came down, CW signals came up and strangely the broadcast band QRM went way down...this on 40m! I can plainly copy CW at 7.040. When I power down the VFO and leave the audio amp on the broadcast band interference comes back up?!?!

I'll look for the circuit you're talking about. I'm also considering a 741 op amp as a pre-amp but I'll have to find a relatively noiseless one. I also plan to build an active CW filter too.

The nice thing about it all is that the VFO is a module, the DBM is a module so it makes it easier to experiment.

I should say thanks here to everyone that's helped me!!!!

Happy Mother's Day Everyone.

Bill
KD4PWB

In article <391E80C2.BC08DDBB@eznec.com>,
Roy Lewallen <w7el@eznec.com> wrote:
> It sounds like you have the same problem I did years ago when building
> direct conversion receivers. I ended up with a common-base stage
between
> the DBM and the main audio amplifier. The problem isn't so much
matching
> the input impedance of the amplifier as it is putting the output from
> the DBM into a matched load that won't waste the signal and trash the
> noise figure. The common-base stage is biased at about 0.5 mA so you
see
> about 50 ohms looking into the emitter. The collector and base
voltages
> were derived from an "active decoupler" -- an emitter follower with
> well-filtered input -- to provide a very low noise source of voltage.
> This arrangement was first published in "An Optimized QRP
Transceiver",
> in August 1980 QST, and was used in Hayward & Hayward's "Ugly
Weekender"
> receiver in August 1981 QST, also by Rick Campbell in his R2 series of
> direct conversion receivers. One or another of these rigs have been in
> various editions of the ARRL Handbook over the years. I made a lot of
> noise figure measurements, and it came out quite respectable although
I
> don't recall the value offhand after all these years. One thing -- If

> you do find the original article, don't use the 2N3565 I recommended.
I
> later found out that its noise figure was terrible at that current,
and
> that an ordinary 2N3904 and a number of other common transistors were
> much better.
>
> Roy Lewallen, W7EL
>
> fretman_2@my-deja.com wrote:
> >
> > I've build a diode ring double balance mixer...50 ohms at each
port. I
> > have a Radio Shack Pocket Amplifier that I'm using for audio
> > amplification...5k ohms input. How can I build a xformer to
transform
> > the 50ohms to 5k ohms audio???
> >
> > Thanks!
> >
> > Bill Harbour
> > KD4PWB
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3899. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8fmde9$s1b1@icet.net.nih.gov>
Source record: 60555
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

Dan/W4NTI (w4nti@my-deja.com) wrote:
: In article <391C479A.ED335B9A@sfu.ca>,
: Kevin McQuiggin <mcquiggi@sfu.ca> wrote:
: > Hi Folks:
: >
: > I've been licenced for 23 years, currently VE7ZD, and am in graduate
: > school up here near Vancouver, BC.
: >
: > I'm researching amateur radio and its history. I'm specifically
: > interested in inventions, discoveries, or techniques that were
: developed
: > within amateur radio and later spread to the electronics industry.
: > Similarly, some of our operating techniques and procedures were later
: > widely adopted by other services.
: >

1) Radio astronomy
2) micro satellites

3900. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <391EBA69.F8A35E93@mlecmn.net>
Source record: 60556

Reg Edwards wrote:
>

>
> I havn't done any calculations at LF but I would judge a 2 or 3-feet
> square, multi-turn loop or frame antenna, would be more sensitive and
> efficient than a solid ferrite rod antenna of the size you have in
> mind. Takes up a much larger volume of space, of course, but costs
> next to nothing.
>

I agree with Reg. Ferrite rod antennas are a good choice when volume is the primary consideration, as in a portable receiver with a built-in antenna. However, unless you have lots of bucks to spend on ferrites, an air-core loop is the way to go. There is a comparison of several portable homebrew LF receiving loops on my web site at http://www.computerpro.com/~lyle/listen/listn1.htm

The biggest ferrite rod antenna I've tried, which is about 30 inches long, is not nearly as good a receiving antenna as a 30-inch diameter "hula hoop" type of loop.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

3901. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8fmdlv$s1b2@icet.net.nih.gov>
Source record: 60557

jos (soj@sympatico.ca) wrote:
: Regards! I am a radio ham which is kind of "disconnected" I have not
: been active for many years but I still have my license! I am an
: engineering consultant in radio frequency and now that I am retired, I
: am interested in the technology used for radio amateur.
: My question! Does anybody know if cuircuits exist to automatically
: generate the BFO frequency (Carrier Regeneration) for SSB detection in a
: multiplier (or product detector); has any researcher tried to do that?
: With today's synthesizers, is it possible to generate the IF frequency
: with enough precision so that the SSB carrier regeneration (BFO) is
: close enough for the audio to be comprehensible. Is automatic control of
: the BFO a desired objective. How many hertz must the BFO be from the
: suppressed carrier for intelligible audio? Thanks!
: VE2AUC
:
:

--

I have been looking for a solution to automatic tuning of SSB w/
suppressed carrier. It would help operate radios remotely via
the Internet. Right now network and audio encoding delays make
interactive ajustment of a receiver difficult. In services where
automatic tuning is important, the carrier is inserted in the
transmission (e.g., VSSB). If you know of a way for automatic
SSB tuning, I would be interested.

Andy Mitz
WA3LTJ
arm@gnode.org
webmaster, the Amateur Radio Listening Post
http://speed.nimh.nih.gov/listener/listener.html

3902. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8fme0o$s1b3@icet.net.nih.gov>
Source record: 60558

Joe Leikhim (jleikhim@nettally.com) wrote:
: I am a relativly new ham. I concentrate my operations from 50 MHz through
: 1.2 GHz. I have not had a lot of experience with older BFO type receivers.
: In my experience with modern synthesized receivers (Mostly ICOM), the
: synthesized VFO circuitry and product detectors are pretty much dead on and
: stable. Where I see improvement needed is in the area of Doppler correction
: when working satellites. I saw a recent article (QEX magazine?) about some
: software that worked with a computer sound card and was effective in
: automatically tuning and regenerating a clean SSB signal. If someone
: develops a receiver that can accomplish this quickly and repeatably in the
: DSP, it would be pretty attractive to those working the LEO satellites. It
: would be even more terrific if Timewave* or NIR would develop an aftermarket
: DSP that could do this. In my experience, being 50 or 100 HZ off frequency
: unacceptably reduces the intelligibility.
:
: * How about it Timewave, a flash upgrade for the 599zx?
:
: --
: Joe Leikhim K4SAT
: Jleikhim@nettally.com
:

Joe,
Can you locate this article for me?

-- Andy WA3LTJ
arm@gnode.org

:
:

--

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
Laboratory of Systems Neuroscience
Section on Neurophysiology
National Institute of Mental Health
Bethesda, Maryland 20892-4401

3903. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Donaly <dtdonaly@pacbell.net>
Message-ID: <391EAEF8.7508@pacbell.net>
Source record: 60559

Reg Edwards wrote:
>
> Wilbur, there's no doubt about it - any powdered form of magnetic
> material mixed with an insulating, non-magnetuc binder will have an
> extemely reduced effective permeability.
>
> For example, solid iron has a permeability of the order 1000 or more.
> But when incorporated in iron-dust low-loss cores and toroids the
> permeability is reduced to 8 or 10. See the toroid manufacturer's
> data. With such a low permeabiliy rod you would be better off with a
> wooden dowel about four times the diameter.

Using the chart in the Amidon Inc. book, of permeability versus
rod length to rod diameter, a 12 inch long .75 inch diameter rod
of #33 material with an initial permeability of 800 would have
an effective permeability of a little more than 100. A rod this
size, if available, would cost about 100 fine American dollars.

Richard Q. Marris, G2BZQ, writing in the March/April QEX describes
a low frequency loopstick antenna made from six ferrite
rods and a wooden dowel. The ferrite rods are glued together from
smaller pieces. This, probably, is not as expensive as one solid
rod, but it's still not cheap.

>
> I havn't done any calculations at LF but I would judge a 2 or 3-feet
> square, multi-turn loop or frame antenna, would be more sensitive and
> efficient than a solid ferrite rod antenna of the size you have in
> mind. Takes up a much larger volume of space, of course, but costs
> next to nothing.

Marris mentions that the signal level using a 48X48 inch square
multiturn loop was greater than that of his ferrite core antenna,
but that the noise was greater also. A 48X48 box loop won't cost
anywhere near $100.00.

>
> Wouldn't take long to knock together an experimental square
> wooden-frame LF / VLF antenna. A twin-gang or 4-gang 500pF variable
> capacitor would be useful. Program RJELOOP3, available free from my
> website, will calculate the number of turns to wind on a given size
> frame, to resonate at a given frequency with a given value of tuning
> capacitor.
> --
> Regards, Reg.
> ==========

> Free radio design software available from : -
> http://www.btinternet.com/~g4fgq.regp
> ================================

Reg's advice is excellent. It would seem that the chief advantage of ferrite rod antennas is size reduction, an advantage for which one must be prepared to pay.

Tom Donaly KA6RUH

3904. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: mark_little_aus@my-deja.com
Message-ID: <8fmgvjjen1@nnrp1.deja.com>
Source record: 60560
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew

In article <8fmde9$s1b1@icet.net.nih.gov>,
arm@nih.gov wrote:
> Dan/W4NTI (w4nti@my-deja.com) wrote:
> : In article <391C479A.ED335B9A@sfu.ca>,
> : Kevin McQuiggin <mcquiggi@sfu.ca> wrote:
> : > Hi Folks:
> : >
> : > I've been licenced for 23 years, currently VE7ZD, and am in
graduate
> : > school up here near Vancouver, BC.
> : >
> : > I'm researching amateur radio and its history. I'm specifically
> : > interested in inventions, discoveries, or techniques that were
> : developed
> : > within amateur radio and later spread to the electronics industry.
> : > Similarly, some of our operating techniques and procedures were
later
> : > widely adopted by other services.
> : >
>
> 1) Radio astronomy

I would have thought that the start of Radio Astronomy came when Jansky
was working at Bell Laboratories from 1931(?) to 1935(?). To be fair,
Reber worked at home a couple of years after that and did a lot of good
work. Anyone know if Reber was a licenced Amateur or just a very good
SWL? ;-)

> 2) micro satellites

Probably one of the most significant examples (in my view anyway).

Mark.

Sent via Deja.com http://www.deja.com/
Before you buy.

3905. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Wilbur <nospm@home.com>
Message-ID: <391EB5DB.2489@home.com>
Source record: 60561

Lyle Koehler wrote:
>
> I agree with Reg. Ferrite rod antennas are a good choice when volume is
> the primary consideration, as in a portable receiver with a built-in
> antenna. However, unless you have lots of bucks to spend on ferrites, an
> air-core loop is the way to go. There is a comparison of several
> portable homebrew LF receiving loops on my web site at
> http://www.computerpro.com/~lyle/listen/listn1.htm
>
> The biggest ferrite rod antenna I've tried, which is about 30 inches
> long, is not nearly as good a receiving antenna as a 30-inch diameter
> "hula hoop" type of loop.
> --
> Lyle, K0LR

Howdy Lyle:

I was hoping you would stop by and make a comment. My interest in ferrite loop antennas came from browsing through issues of the Lowdown. I was captivated by the 'Monster Loop' with a rod assembly 2.5" diameter and 216" long as described in April 1995 and the data on various loops presented in the in the December 1998 issue.

The interest I have is making my own rod out of bulk powder and epoxy. Like you said, the rods are expensive---especially from having to build a large core out of smaller lengths. I'm interested in making my own rods (or one large rod) out of bulk powder and epoxy. I was told this method was employed for short runs in an RF lab for evaluation purposes but I have no other information. They would get powder in sample bags about the size of a quart baggie, mix with epoxy then pour it into a mold, cure, whereupon it would it be tested electrically.

BTW, you are right about the high cost ferrite rods---why is this so anyway?

3906. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <XcAT4.65821$WF.3644758@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60562
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

The TDA1072 or the TDA1572 have very good AGC characteristics, require no transformers at the IF input, and provide around 80dB of gain. The demodulated audio is so clean, that when I was demonstrating one of my radios to a fellow the other day, he thought I was using synchronous detection!

Pete Gianakopouloos

J M Noeding <LA8AK@online.no> wrote in message news:391d0fdf.120580548@news.online.no...
> On Mon, 01 May 2000 11:00:28 +1000, "Russ.Shaw" <russell@webaxs.net>
> wrote:
>
> >I wanted to make the if strip using standard 455kHz if-transformers,
> >and more gain with fewer stages can be got at lower frequencies. I
> >can get 35-40dB gain from a BC548 transistor at 1mA using transformers,
> >and they're easier to get and have a nicer agc characteristic than ics
> >i know of.
> >
> BF199 is better for tuned stages considering stability

3907. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <391ED9C3.C9A77B7A@sympatico.ca>
Source record: 60563

Thanks! I would be pleased to know which issue in QEX it is! VE2AUC

Joe Leikhim wrote:

> I am a relativly new ham. I concentrate my operations from 50 MHz through
> 1.2 GHz. I have not had a lot of experience with older BFO type receivers.
> In my experience with modern synthesized receivers (Mostly ICOM), the
> synthesized VFO circuitry and product detectors are pretty much dead on and
> stable. Where I see improvement needed is in the area of Doppler correction
> when working satellites. I saw a recent article (QEX magazine?) about some
> software that worked with a computer sound card and was effective in
> automatically tuning and regenerating a clean SSB signal. If someone
> develops a receiver that can accomplish this quickly and repeatably in the
> DSP, it would be pretty attractive to those working the LEO satellites. It
> would be even more terrific if Timewave* or NIR would develop an aftermarket
> DSP that could do this. In my experience, being 50 or 100 HZ off frequency
> unacceptably reduces the intelligibility.
>
> * How about it Timewave, a flash upgrade for the 599zx?
>
> jos wrote:
>
> > Regards! I am a radio ham which is kind of "disconnected" I have not
> > been active for many years but I still have my license! I am an
> > engineering consultant in radio frequency and now that I am retired, I
> > am interested in the technology used for radio amateur.
> > My question! Does anybody know if cuircuits exist to automatically
> > generate the BFO frequency (Carrier Regeneration) for SSB detection in a
> > multiplier (or product detector); has any researcher tried to do that?
> > With today's synthesizers, is it possible to generate the IF frequency
> > with enough precision so that the SSB carrier regeneration (BFO) is
> > close enough for the audio to be comprehensible. Is automatic control of
> > the BFO a desired objective. How many hertz must the BFO be from the
> > suppressed carrier for intelligible audio? Thanks!
> > VE2AUC
>
> --
> Joe Leikhim K4SAT
> Jleikhim@nettally.com
>
> "tv dinner by the pool,
> i'm so glad i finished school" -F.Zappa 1967
>
> "The Revolution will NOT be televised" -Gil Scott Heron
>

> Dopeler effect: The tendency of stupid ideas to seem smarter when they come
>
> at you rapidly.

3908. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <391EEB02.494F9EA0@mlecmn.net>
Source record: 60564

Wilbur wrote:
>

>
> The interest I have is making my own rod out of bulk powder and epoxy.
> Like you said, the rods are expensive---especially from having to build
> a large core out of smaller lengths. I'm interested in making my own
> rods (or one large rod) out of bulk powder and epoxy. I was told this
> method was employed for short runs in an RF lab for evaluation purposes
> but I have no other information. They would get powder in sample bags
> about the size of a quart baggie, mix with epoxy then pour it into a
> mold, cure, whereupon it would it be tested electrically.
>

Somewhere in the dim past I've seen "recipes" for making your own ferrite powder -- I believe it was in a book about experimenting with magnetics, but can't remember any other details. Maybe there is an old Scientific American "Amateur Scientist" column that describes the technique.

> BTW, you are right about the high cost ferrite rods---why is this so
> anyway?

Beats the heck outa me. The price of ferrite rods seems to have risen at a pace that exceeds inflation. Must be supply and demand.

--
Lyle, K0LR

http://www.computerpro.com/~lyle

3909. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: "Peter O. Brackett" <ab4bc@ix.netcom.com>
Message-ID: <8fmqco$g0k$1@slb7.atl.mindspring.net>
Source record: 60565
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

Kevin:

More Re: Marconi the amateur.

I have in front of me here a hard cover book "The wireless experimenter's manual", by Elmer E. Bucher, Wireless Press, Inc. 1920, LCCN 20-5750, LC Call Number TK9946.B85. In the back of the book is a tear out page which is an application form to join "The National Amateur Wireless Association", the fee for joining is $2.50. The address for the Association is given as 326 Broadway, Room 301, New York.

The head of this Amateur Association is listed as: Gugliemo Marconi, President
There is a National Advisory Board of Vice Presidents listed, which includes: Prof. Arthur E. Kennely, Harvard, Prof. Alfred N. Goldsmith, College of the City of New York, etc...

The text on the application reads... "Join Now" You should be a member of the organization that is doing real things for the advancement of amateur radio. etc.... I could make a xerox copy of the application form and fax it to you if you wish.

In recent years we have such "amateurs" as...

Phil Karn KA9Q...

who almost single handedly introduced the Internet's TCP/IP protocol suite to the modern personal computer [IBM clones as opposed to the Unix based computers] by the release of his "KA9Q" TCP/IP "stack" as free ware. Many professional programmers had said that the base PC with the 8086 microcomputer and 640 K of memory could never support such a complicated communications stack and that only powerful Unix machines could do that! Well... Phil did it anyway and then...

This KA9Q "stack" was picked up and modified by many commercial interests and led to the exponential growth of TCP/IP on the PC platform, and made a very large contribution to the commercial growth of the Internet.

Peter K1PO

"Kevin McQuiggin" <mcquiggi@sfu.ca> wrote in message news:391C479A.ED335B9A@sfu.ca...
> Hi Folks:
>
> I've been licenced for 23 years, currently VE7ZD, and am in graduate

> school up here near Vancouver, BC.
>
> I'm researching amateur radio and its history. I'm specifically
> interested in inventions, discoveries, or techniques that were developed
> within amateur radio and later spread to the electronics industry.
> Similarly, some of our operating techniques and procedures were later
> widely adopted by other services.
>
> Hams operate outside of the structured environments within industry, and
> I think that this freedom has permitted us to invent and discover
> without being shackled by any policy issues, or possible stigmatism from
> investigating things that would be considered "too far out in left
> field" by management and non-ham co-workers.
>
> Examples would be the investigation of wavelengths below 200 meters,
> with the discovery by hams that such wavelengths were better for
> propagation than longer waves; packet radio; APRS; propagation studies
> that were undertaken in the 20s and 30s; facsimile; SSTV; and network
> operating techniques.
>
> Some of this stuff was regulated, such as the banishment of amateur
> radio to the "useless" wavelengths < 200 M, but this sort of proves my
> point. There's been lots of innovation within the hobby, and the general
> public now benefits from it.
>
> If anyone could provide me with more examples, or good books or articles
> on this topic, then that'd be great. Of course I'll give appropriate
> credit to those who assist!
>
> If you could email me as well as posting your reply, thanks. There's
> lots of traffic in these groups and I don't want to miss any replies.
>
> 73,
>
> Kevin VE7ZD
> mcquiggi@sfu.ca
>
>

3910. FS Ham equip

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Carl & Delores Walthall <cwalthall@globesurfer.net>
Message-ID: <8fmr9o$d9o$1@newsfeed.norlight.net>
Source record: 60566

I have the following equipment for sale.

1: Astron RS 35A $100.00
2: Radio Shack Newest 10 meter HF radio $100.00
3: Hf watt meter from radio shack 20 - 2000 watts $35.00
4: FC-20 auto ant. tuner for the FT-847 earth station or FT-100
never used $180.00
5: Mobile 40/15/10/6/2 meter ant. $90.00 Comet CA-HV
6: Comet Z780 6/8 2 meters and 5/8 400 mhz mobile ant. $60.00
7: Four Magnet mobile mount $45.00

All equipment like new, mobile only a short period of time. Buyer
pays shipping.

Carl
evenings 262-736-2623
days 815-884-3629

--
You cant catch the tigers cub unless you dare to step into it's cave.

3911. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: jeffreyh@Hawaii.Edu
Message-ID: <8fmsk7$9et$1@news.hawaii.edu>
Source record: 60567
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

Follow-ups set to just .misc...

<wd1v@amsat.org> wrote:
>The first amateur was Marconi

I'd think he fall into the "professional" catagory rather than
the "amateur" catagory. He had visions of $$$ in mind all the
while he was perfecting his apparatus. Note that his equipment
contained nothing original -- he utilized ideas and devices of
the legions of inventors who came before him. (For example, in
Blake's HISTORY OF RADIO TELEGRAPHY AND TELEPHONY, an encyclopeadia
of early wireless circuits, Marconi's apparatus isn't presented
until page 100 -- 99 pages of circuits and their descriptions
come before him.) We can thank him for putting all the pieces
together into a workable system.

73, Jeff KH6O

Follow-ups set to just .misc

3912. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <391e677d.208559464@news.online.no>
Source record: 60568

On Sat, 13 May 2000 21:16:03 GMT, jos <soj@sympatico.ca> wrote:

>Regards! I am a radio ham which is kind of "disconnected" I have not
>been active for many years but I still have my license! I am an
>engineering consultant in radio frequency and now that I am retired, I
>am interested in the technology used for radio amateur.
>My question! Does anybody know if cuircuits exist to automatically
>generate the BFO frequency (Carrier Regeneration) for SSB detection in a
>multiplier (or product detector); has any researcher tried to do that?
>With today's synthesizers, is it possible to generate the IF frequency
>with enough precision so that the SSB carrier regeneration (BFO) is
>close enough for the audio to be comprehensible. Is automatic control of
>the BFO a desired objective. How many hertz must the BFO be from the
>suppressed carrier for intelligible audio? Thanks!
>VE2AUC
>
>
it was an AFC circuit mentioned in Radcom 20 years ago, based on some
ideas for Collins 51-S or similar receiver. believe it was originally
described in QST, it uses AM envelope detector as well as product
detector. Once hooked it up on my 2m transceiver, but it was too
little and only random ssb activity for alignment, so I never got it
operational

3913. Re: GE MASTR II

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <3917FEAE.35B8@nbnet.nb.ca>
Source record: 60569

Howdy.....confirm that the squelch will open....if it seems to work but level is still very low, inject audio at the volume pot to confirm audio amplifier basically ok. If this pans out, take another look at your tune-up....did you, by chance or purpose, adjust the discriminator so very narrow so as to not allow anything to be detected? I've made this mistake when I was green at it being fooled while using a CW source and not an FM source (all I had on hand). Other than that, perhaps an audio jumper out of place which may have formerly been used for comercial CTCSS etc. Best of luck.

73 - Gord VE1AJF

3914. 70 MHz. AM/SSB IF strip (was:Cheap 455kHz SSB filters?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <9b7uhsk8vs2ak6dltgtge2p8gr4k1od2tc@4ax.com>
Source record: 60570
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

"NANCY GIANAKOPOULOS" <n.gianakopoulos@worldnet.att.net>
shared these priceless pearls of wisdom:

->The TDA1072 or the TDA1572 have very good AGC characteristics, require no
->transformers at the IF input, and provide around 80dB of gain. The
->demodulated audio is so clean, that when I was demonstrating one of my
->radios to a fellow the other day, he thought I was using synchronous
->detection!

Anybody got a handle on a good clean device that will do this up at 70 MHz.?
Most of these devices fall off VERY fast above 500 kHz.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3915. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fmm9drts1@uranium.btinternet.com>
Source record: 60571

Paul, your analysis makes sense. It's of value when the local
oscillator is noisy (which can be improved) and if the antenna in use,
such as a magloop, is 20 dB down relative to a 1/2-wave dipole.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
Paul Keinanen <keinanen@sci.fi> wrote in message
news:j2jshsghvicnkasih80cmcf4vugg3gdciq@4ax.com...
> On Sat, 13 May 2000 18:17:07 +0100, "Reg Edwards"
> <G4fgq.Regp@btinternet.com> wrote:
>
> >At 7 MHz the internal noise of an ordinary receiver is many dB
below
> >the normal band noise.
>
> "Ordinary" HF receivers have noise figures in the order of 10 .. 20
dB
> without a preamplifier and the band noise at 7 MHz are 40 .. 60 dB
> over thermal noise, depending on location and time of day and year.
So
> indeed, the reception is band noise limited.
>
> However, consider a direct conversion receiver with a diode ring
mixer
> having a -6 dB gain (actually conversion loss) followed by an audio
> amplifier with a noise figure of 10 dB (which may be typical for
> amplifiers not designed with low noise as the primary goal). Due to
> the loss in the mixer, the total noise figure would be 16 dB, quite
> sufficient for 7 MHz. However, in direct conversion receivers, the
> output is nearly DC and some mixers generate a strong 1/f noise, so
> according to some articles in QST, the SBL-1 type mixer will exhibit
> 17 dB noise figures at audio frequencies, thus the total noise
figure
> is determined by the mixer noise figure alone.
>
> Now, insert a 20 dB attenuator between the mixer and audio
amplifier,
> the combined noise figure will be -(-6 dB -20 dB)+10 dB or 36 dB,
> which is close to the band noise for quiet locations. In this case
the
> mixer 1/f noise is much less than the combined noise figure of the

> attenuator and audio amplifier and thus it is not included in the
> calculation.
>
> Terminating the mixer with a 50 ohm resistor and feeding the signal
> into an amplifier with 5 kOhm input impedance has the same effect as
> inserting a 20 dB attenuator between matched components.
>
>
>
> >So signal to noise ratio is determined by what is collected by the
> >antenna. Little can be done to improve matters except by
increasing
> >antenna directivity and using a rotary beam.
> >
> >The problem you describe cannot arise at 7 MHz.
>
> This is not a problem with a full sized dipole in urban areas, where
> the band noise is very high, but can be significant in quiet rural
> locations, especially if the antenna (and antenna tuner) is lossy,
> which is often the case in portable operations.
>
>
> >It is something to consider at 145 MHz and certainly at 1 GHz.
>
> For 145 MHz I have usually seen noise values of 0 .. 10 dB over
> thermal noise quoted. For 1 GHz much lower values are quoted when
the
> antenna is pointing at the "cold" sky.
>
>
> >It is a simple matter to check. Peak up the tuning on your receiver
in
> >between signals and LISTEN only to background noise which is
usually
> >very long distance static + local clicks and pops. Then disconnect
the
> >antenna from the receiver input. If you like, terminate the
receiver
> >input with 50 ohms.
> >
> >If after disconnection there's a noticeable reduction in noise in
the
> >speaker, despite the agc doing its best to keep it constant, then
> >there's nothing at all to worry about.
>
> Then repeat the experiment with all preamplifiers off and a 20 .. 30
> dB antenna attenuator inserted between the antenna and receiver.
This
> will much closely match the situation with mismatched audio
amplifier.

>
> Paul OH3LWR
>

3916. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fmnjj$8dr$1@plutonium.btinternet.com>
Source record: 60572

I think automatic tuning of the local oscillator for receiving
suppressed carrier is impossible. There is nothing to lock on to. I
understand the few broadcasting stations which use SSB actually
transmit a low-level carrier for lock-on purposes at the receiver
which requires a phase discriminator.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
Andrew R Mitz <arm@helix.nih.gov> wrote in message
news:8fmdlv$s1b2@icet.net.nih.gov...
> jos (soj@sympatico.ca) wrote:
> : Regards! I am a radio ham which is kind of "disconnected" I have
not
> : been active for many years but I still have my license! I am an
> : engineering consultant in radio frequency and now that I am
retired, I
> : am interested in the technology used for radio amateur.
> : My question! Does anybody know if cuircuits exist to automatically
> : generate the BFO frequency (Carrier Regeneration) for SSB
detection in a
> : multiplier (or product detector); has any researcher tried to do
that?
> : With today's synthesizers, is it possible to generate the IF
frequency
> : with enough precision so that the SSB carrier regeneration (BFO)
is
> : close enough for the audio to be comprehensible. Is automatic
control of
> : the BFO a desired objective. How many hertz must the BFO be from
the
> : suppressed carrier for intelligible audio? Thanks!
> : VE2AUC
> :
> :
>
> --
>
> I have been looking for a solution to automatic tuning of SSB w/
> suppressed carrier. It would help operate radios remotely via
> the Internet. Right now network and audio encoding delays make
> interactive ajustment of a receiver difficult. In services where

> automatic tuning is important, the carrier is inserted in the
> transmission (e.g., VSSB). If you know of a way for automatic
> SSB tuning, I would be interested.
>
> Andy Mitz
> WA3LTJ
> arm@gnode.org
> webmaster, the Amateur Radio Listening Post
> http://speed.nimh.nih.gov/listener/listener.html
>
>

3917. Testing crystals ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Duffer <hduff@ica.net>
Message-ID: <391F304A.DE1CFD25@ica.net>
Source record: 60573

Looking for a test circuit for crystals (wideband oscillator ?)..
Anyone ? Please reply to hduff@ica.net

3918. Re: Testing crystals ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <kiGT4.22180$X91.118756@news02>
Source record: 60574

What frequency range are you trying to test in and how accurate do you need to be ?

A simple way to test fundamental mode AT cut crystals is to simply use a chip like the National CGS3311

http://www.fairchildsemi.com/pf/CG/CGS3311.html

This will at least give you an approximate idea of what is going on. At the other end of the scale, well hold on to your wallet it can get pretty expensive.

Hope this helps.

Bob Camp
KB8TQ

"Duffer" <hduff@ica.net> wrote in message
news:391F304A.DE1CFD25@ica.net...
> Looking for a test circuit for crystals (wideband oscillator ?)..
> Anyone ? Please reply to hduff@ica.net
>

3919. FS:BANDPASS DUPLEXER'S

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: N9ZDZ <dbraggs@hcis.net>
Message-ID: <392091c3$0$26527@wodc7nh6.news.uu.net>
Source record: 60575

DB4075
LOOK AT THIS AT
http://www.telecom.com
They are good one's.
Please make an offer.
Thank you

3920. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-14 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <391D6349.55242359@webaxs.net>
Source record: 60694
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Hi,

Unfortunately, filters for 10.7MHz are usually wider band, so strong
adjacent signals are let thru to the second mixer. So to get good
two-tone dynamic range, two high-level mixers are needed.

With a 455kHz single IF, i only need one ring mixer and less parts.

Dave wrote:
>
> There are the tradeoffs. Higher If and image rejection. How about
> going to 10.7 mhz with a ceramic filter for image rejection and then
> down to 455 for the final sideband filtering?
>
> * Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
> The fastest and easiest way to search and participate in Usenet - Free!

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3921. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fnbpd$me9$1@uranium.btinternet.com>
Source record: 60576

The cost of ferrites lies in producing and controlling within close limits the various proportions of the long string of precise chemical compounds and clearing out the even longer string of deleterious substances. High pressures and high temperatures are involved.

The shaping and forming of ferrite materials is also an expensive process. They are diamond hard and brittle. Have you ever tried sawing a ferrite rod in half ? I have never yet succeeded even after ruining as many as three, cobalt and tungsten, high-speed steel, saw blades. The trick is to saw a notch all the way round the circumference and snap the beast in two. It occasionally works.

Any home-made mixtures, baked in the oven, poor-man's substitutes, are obviously entirely different materials. One might just as well experiment with iron filings and superglue.

Or wind some wire on a 6" diameter, air-core, pvc drain pipe.
--
Regards, Reg, G4FGQ.
==========
http://www.btinternet.com/~g4fgq.regp
==========
Lyle Koehler <lyle@mlecmn.net> wrote in message
news:391EEB02.494F9EA0@mlecmn.net...
>
>
> Wilbur wrote:
> >
>
> >
> > The interest I have is making my own rod out of bulk powder and
epoxy.
> > Like you said, the rods are expensive---especially from having to
build
> > a large core out of smaller lengths. I'm interested in making my
own
> > rods (or one large rod) out of bulk powder and epoxy. I was told
this
> > method was employed for short runs in an RF lab for evaluation
purposes
> > but I have no other information. They would get powder in sample
bags
> > about the size of a quart baggie, mix with epoxy then pour it into
a
> > mold, cure, whereupon it would it be tested electrically.

> >
>
> Somewhere in the dim past I've seen "recipes" for making your own
> ferrite powder -- I believe it was in a book about experimenting
with
> magnetics, but can't remember any other details. Maybe there is an
old
> Scientific American "Amateur Scientist" column that describes the
> technique.
>
> > BTW, you are right about the high cost ferrite rods---why is this
so
> > anyway?
>
> Beats the heck outa me. The price of ferrite rods seems to have
risen at
> a pace that exceeds inflation. Must be supply and demand.
>
> --
> Lyle, K0LR
>
> http://www.computerpro.com/~lyle

3922. Ideas for a Homebrew Shortwave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: <antispam@clavin.freeserve.co.uk>
Message-ID: <8fnf5amne1@newsg4.svr.pol.co.uk>
Source record: 60577

Hi guys,

Im designing a SW receiver. The specs are... 5.95 mhz to 14.30 Mhz receive. Single conversion, 455 khz.

with... RF Pre-selector AND tuned RF amplifier to minimise 2nd order receive products. Switched 6dB attenuator for 3rd order product elimination. Diode ring mixer(low noise) followed by two tuned IF amp's sandwiching a murata CFG455H high performance 6khz I.F filter. Diode detector for AM and insertion osc/product detector for cw/ssb. SCAF audio filter and 3-4 watt audio output.

Anyone got any ideas to improve on things? For example, to minimise intermodulation products the VFO and insertion osc should be pure. Anyone got tips on how to design and build a spectrally "pure" oscillator? Also Which units should be individually screened when i begin to build?.. I'm thinking screened RF stage and screened VFO's. Any comments welcome....

Cheers, John. PS, how do I

3923. Re: Ideas for a Homebrew Shortwave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <PYIT4.22206$X91.121044@news02>
Source record: 60578

You might think about a higher IF frequency. Even a single pole crystal filter at say 30 or 40 MHz might help things some. 45 MHz cell phone IF filters go for a couple of dollars. I suspect you will have to do an image reject mixer to get rid of the IF image at 14 MHz.

On the VFO question most of what you see these days are microwave oscillators based on dielectric resonators. They divide them down to RF frequencies with low noise divider chips. Mini Circuits sells the VCO/divider modules fairly cheap. Look for the stuff with phase noise numbers in the -150 dbc/Hz region. Once you have one running you can run it through a tracking filter to clean it up some more.

Enjoy!

Bob Camp
KB8TQ

"&#65533;" <john@clavin.freeserve.co.uk> wrote in message
news:8fnf5amne1@newsg4.svr.pol.co.uk...
> Hi guys,
>
> Im designing a SW receiver. The specs are... 5.95 mhz to 14.30 Mhz
> receive. Single conversion, 455 khz.
>
> with... RF Pre-selector AND tuned RF amplifier to minimise 2nd
order
> receive products. Switched 6dB attenuator for 3rd order product
elimination.
> Diode ring mixer(low noise) followed by two tuned IF amp's
sandwiching a
> murata CFG455H high performance 6khz I.F filter. Diode detector for
AM and
> insertion osc/product detector for cw/ssb. SCAF audio filter and 3-4
watt
> audio output.
>
> Anyone got any ideas to improve on things? For example, to minimise
> intermodulation products the VFO and insertion osc should be pure.
Anyone
> got tips on how to design and build a spectrally "pure" oscillator?
Also
> Which units should be individually screened when i begin to build?..
I'm
> thinking screened RF stage and screened VFO's. Any comments
welcome....

>
> Cheers, John. PS, how do I
>
>
>
>

3924. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <om0vhscom0dismnn6q9q4t74ukjh91o349@4ax.com>
Source record: 60579

On Sun, 14 May 2000 18:26:13 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>I think automatic tuning of the local oscillator for receiving
>suppressed carrier is impossible. There is nothing to lock on to.

I do not know about speech, but music contains a lot of signals that have a rich harmonic contents e.g. 100 Hz fundamental with 200 Hz, 300 Hz, 400 Hz etc. harmonics. On SSB with +10 Hz error, these tones are at 110, 210, 310, 410 Hz etc. which are no longer harmonically related. Some DSP algorithm might try different frequency offsets in order to produce harmonically related output tones.

> I understand the few broadcasting stations which use SSB actually
>transmit a low-level carrier for lock-on purposes at the receiver
>which requires a phase discriminator.

The carrier is usually attenuated by 6 or 12 dB, significantly reducing the electric bill for the station :-).

Paul OH3LWR

3925. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Roy Lewallen <w7el@eznec.com>
Message-ID: <391FC24B.CF7ADFC8@eznec.com>
Source record: 60580

It's interesting you mention the broadcast band QRM. If it doesn't change as you tune the receiver, it's due to AM demodulation. This is a real problem in direct conversion receivers, and can be minimized only if you have good mixer balance. One of the keys to this is proper mixer termination. Both Rick's and my articles talk about this issue, and the best mixer either of us has found for DC receivers is a diode ring.

Roy Lewallen, W7EL

fretman_2@my-deja.com wrote:
>
> Thanks Roy for the advice. I did put a 50 ohm resistor across the
> terminals of the audio port and it helped considerably!! The noise
> came down, CW signals came up and strangely the broadcast band QRM went
> way down...this on 40m! I can plainly copy CW at 7.040. When I power
> down the VFO and leave the audio amp on the broadcast band interference
> comes back up?!?!
>
> I'll look for the circuit you're talking about. I'm also considering a
> 741 op amp as a pre-amp but I'll have to find a relatively noiseless
> one. I also plan to build an active CW filter too.
>
> The nice thing about it all is that the VFO is a module, the DBM is a
> module so it makes it easier to experiment.
>
> I should say thanks here to everyone that's helped me!!!!
>
> Happy Mother's Day Everyone.
>
> Bill
> KD4PWB

3926. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <391FE59A.3289BEAF@sympatico.ca>
Source record: 60581

Thanks for this information! I do not know Radcom; may be, this is "Radio Communication" magazine or something similar! I do not know this magazine or its publisher. I believe that there was a discussion about this design a few years ago on this newsgroup but I forgot who mentioned it! Regards! VE2AUC

J M Noeding wrote:

> On Sat, 13 May 2000 21:16:03 GMT, jos <soj@sympatico.ca> wrote:
>
> >Regards! I am a radio ham which is kind of "disconnected" I have not
> >been active for many years but I still have my license! I am an
> >engineering consultant in radio frequency and now that I am retired, I
> >am interested in the technology used for radio amateur.
> >My question! Does anybody know if cuircuits exist to automatically
> >generate the BFO frequency (Carrier Regeneration) for SSB detection in a
> >multiplier (or product detector); has any researcher tried to do that?
> >With today's synthesizers, is it possible to generate the IF frequency
> >with enough precision so that the SSB carrier regeneration (BFO) is
> >close enough for the audio to be comprehensible. Is automatic control of
> >the BFO a desired objective. How many hertz must the BFO be from the
> >suppressed carrier for intelligible audio? Thanks!
> >VE2AUC
> >
> >
> it was an AFC circuit mentioned in Radcom 20 years ago, based on some
> ideas for Collins 51-S or similar receiver. believe it was originally
> described in QST, it uses AM envelope detector as well as product
> detector. Once hooked it up on my 2m transceiver, but it was too
> little and only random ssb activity for alignment, so I never got it
> operational

3927. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8forc5$1ei$1@nnrp1.deja.com>
Source record: 60582

In article <8ff7bdtuc1@nnrp1.deja.com>,
fretman_2@my-deja.com wrote:
> I've build a diode ring double balance mixer...50 ohms at each port.
I
> have a Radio Shack Pocket Amplifier that I'm using for audio
> amplification...5k ohms input. How can I build a xformer to transform
> the 50ohms to 5k ohms audio???

Have a look at Rick Campbell's R2 DC Rx in the ARRL Handbook. He uses a
low-noise pre-amp with a diplexer. There are simpler circuits around
which are nearly as good.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

3928. Wanted: ERA Microreader MKII.

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Maggie <john@mm1dsp.freeserve.co.uk>
Message-ID: <8fovqlrpu1@news6.svr.pol.co.uk>
Source record: 60583

ERA Microreader MKII wanted.
Please reply direct to address below.

Many thanks.

John.

john@mm1dsp.freeserve.co.uk

3929. IRF510

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Laurent CHABERT <Laurent.chabert@imag.fr>
Message-ID: <392011EA.51D7@imag.fr>
Source record: 60584

Hello I am a french om and i am also interested about:
>suitable schematic for a 5w IRF510 power amp??
I think the CENTENNIAL KIT is working with MTP3055E but I d'ont have any schematics about it and I would be very interested about it IF someone can forward it to me.

I have the links:

PA with mosfet:
http://www.qsl.net/ei9gq/80pa.html

The Centennial 80-meter SSB/CW QRP transceiver:
http://www.natworld.com/ars/pages/back_issues/0598_%7Ftext/cent.html

Laurent (F4 AER from FRANCE)

3930. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39200EDB.F4CBBFAA@midwestmicro-tek.com>
Source record: 60585

I might be thinking of a different kind/manufacturer of tubes but I remember
something about sub-mini tubes being developed for use in space rockets. They had
to be small, low power, and above all they had to be shock proof. Maybe these
were the ones?

Rick KC0GIX

Michael Black wrote:

> On Wed, 10 May 2000, Bob wrote:
>
> > Nothing special about a Nuvistor except its size. They are very tiny in an
> > attempt to compete with transistors. RCA created the name, and at the same
> > time, marketed their television receivers with the slogan New Vista.
> >
> > They do require special sockets.
> >
> > 73, Bob K6DDX
> >
> I've never seen a good history of the Nuvistor. But I'm not sure
> miniaturization was the primary focus. Remember, there were sub-miniature
> tubes available at the time the Nuvistors hit the market, and those
> sub-minis were used in plenty of portable equipment (such as hearing
> aids, portable radios, and those lunchbox style walkie talkies that
> Motorola once made) whereas I can't think of something a Nuvistor was used
> in to provide primarily miniaturization.
>
> Nuvistors were introduced at a time when transistors were not all that
> great at RF, so I'm not sure the "compete with transistors" theory works.
>
> Certainly in Ham circles, the Nuvistor was used because it had low noise
> figure, good for VHF reception. When they were introduced, the only
> thing better, paramps and tubes like the 416, were far more expensive and
> finicky to use. Nuvistors beat out any common tube used in VHF
> front ends at the time. And this held true until good transistors and
> FETs arrived on the scene.
>
> And while I've never seen one, I understand that Nuvistors showed up
> in some TV front ends, again presumably for the low noise figure.
>
> The miniaturization of the tube might have provided the Nuvistor with
> certain performance increases, but my RCA Receiving Tube Handbook
> barely mentions the Nuvistor.
>
> Michael VE2BVW

3931. Re: 70 MHz. AM/SSB IF strip (was:Cheap 455kHz SSB filters?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: NANCY GIANAKOPOULOS <n.gianakopoulos@worldnet.att.net>
Message-ID: <uvVT4.67383$fV.4138850@bgtnsc05-news.ops.worldnet.att.net>
Source record: 60586
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

The Analog Devices AD600, followed by the AD607 quadrature IF/demodulator chip is a good bet. Be advised, though, that it requires a fair amount of effort to get the '607 balanced for AM demodulation. I fiddled around with this combination about a year ago, and went to the TDA1072/1572 series of chips; I operated these devices at 455KHz though, so I didn't run into the gain-bandwidth issues.

Pete Gianakopoulos

Jim Weir <jim@rst-engr.com> wrote in message
news:9b7uhsk8vs2ak6dltgtge2p8gr4k1od2tc@4ax.com...
> "NANCY GIANAKOPOULOS" <n.gianakopoulos@worldnet.att.net>
> shared these priceless pearls of wisdom:
>
> ->The TDA1072 or the TDA1572 have very good AGC characteristics, require
no
> ->transformers at the IF input, and provide around 80dB of gain. The
> ->demodulated audio is so clean, that when I was demonstrating one of my
> ->radios to a fellow the other day, he thought I was using synchronous
> ->detection!
>
> Anybody got a handle on a good clean device that will do this up at 70
MHz.?
> Most of these devices fall off VERY fast above 500 kHz.
>
> Jim
> Jim Weir, VP Eng. RST Eng. WX6RST
> A&P, CFI, and other good alphabet soup

3932. Ever wonder how a JIGSAW PUZZLE is Made ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: puzzle guy <puzzled@pacificcoast.net>
Message-ID: <enWT4.31578$q_4.793267@news1.gvcl1.bc.home.com>
Source record: 60587

The FREE internet video demonstrate just how simple and fast
the entire jigsaw puzzle manufacturing process can be.

If you have a slow Internet connection the first one would
be the best, and the third would be best for a fast
connection:

1. Low Resolution 320 x 240 video & sound :
http://members.home.net/puzzlemachine/POGI.rm
2. High Resolution slide show with sound:
http://members.home.net/puzzlemachine/Slide.rm
3. High Resolution video with sound :
http://members.home.net/puzzlemachine/POGIhi.rm

If you don't have the Real Player installed on your
computer, a FREE basic version may
be downloaded from this web page -
http://www.real.com/player/index.html?src=downloadr

4. Quick Time video :
http://members.home.net/jigsawpuzzle/POGI.mov

Profits that can be made from manufacturing jigsaw puzzles,
are broken down at
http://www.pacificcoast.net/~gciesek/profit.html

3933. Re: 70 MHz. AM/SSB IF strip (was:Cheap 455kHz SSB filters?)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Jim Weir <jim@rst-engr.com>
Message-ID: <2qc0is02na8853bo4dd4coknch3obgquf1@4ax.com>
Source record: 60588
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

"NANCY GIANAKOPOULOS" <n.gianakopoulos@worldnet.att.net>
shared these priceless pearls of wisdom:

->The Analog Devices AD600, followed by the AD607 quadrature IF/demodulator
->chip is a good bet.

Nope. The 600 GBW is 3 dB down at 30 MHz. I don't know what it is like at 70,
but I tend to shy away from operating a device above the knee. Mostly, they
turn unstable in this domain.

Jim
Jim Weir, VP Eng. RST Eng. WX6RST
A&P, CFI, and other good alphabet soup

3934. Society of Amateur Radio Programmers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: David Johnson <kb5ylg@gte.net>
Message-ID: <UeXT4.327$xM5.115953@dfiatx1-snr1.gtei.net>
Source record: 60589

now forming

http://www.geocities.com/kb5ylg

3935. Re: HF Transceivers -Opinions?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <3920459B.2F7A@ixpres.com>
Source record: 60590

Eamon Skelton wrote:
>
> >A am interested in a HF transceiver (1K, or so, price range). I have been
> >looking at the TS-570D and the IC-706MKIIG.
>
> The best way to get the rig you want, is to build it yourself.
> You get the features you want, you don't have to buy the features
> you don't need.
>
> 73, Ed. EI9GQ.
>

AMEN! Then it does what I want, and ONLY what I want.

Next best thing: buy something older, like a TS820. Repairable,
rugged, built-in ps ,pi-net, and FSK, and a lot less than $1000. Take
the money you save and put it into good antenna materials.

73,
Don, W6JL

3936. Re: new kit company starting soon

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <3920482B.5CAF@ixpres.com>
Source record: 60591

> Here's a translation:
>
> remember the good old days when every electronic store in the country
> had a heathkit product on their shelf where every radio enthusiast
> had a project half finished sitting on his desk and half the radios on
> the market were home brewed and not those fancy new electronic gizmos
> well there is a new company starting up in hamilton ontario and they
> will have kits for everything from kits for your kids (like a simple
> blinky flasher) to a kit for granddads and dad a qrp transmitter for
> his station at home and accessories be it a dsp or even an antenna
> tuner it will becoming soon watch this newsgroup for more info and
> when it starts pass the word around finally the old will be new
> again wouldn't you all like a kit to say i built it myself

Here is my translation of your translation: Still more gibberish.

Whew! Was that "translation" intentionally supposed to be a long single
sentence? Not a capital letter, comma, or sentence in there.

Ever hear of:
Punctuation, sentence structure, capitalization, English grammar?

73,
Don, W6JL

--
ï¿½ï¿½à¡±ï¿½

3937. Re: >>>> Last Call - Dayton Vendors <<<<<

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: KI8IK <ki8ik@my-deja.com>
Message-ID: <8fpj3o$t5c$1@nnrp1.deja.com>
Source record: 60592
Cross-posted to: rec.radio.amateur.homebrew,alt.ham-radio.morse

Last chance to make this list.
I'll post it tomorrow afternoon.

So far I've heard from most QRP "inside vendors",
but have had only three "outside vendors" respond.

In article <8fh9bj$5ja$1@nnrp1.deja.com>,
KI8IK@arrl.net wrote:
> If you're a Hamvention vendor who plans on selling QRP equipment
please
> contact me at KI8IK@arrl.net. I'm compiling a list of QRP vendors for
> subscribers of the QRP-L reflector. This will help them easily locate
> you among the thousands of sellers in attendance.
>
> Items of interest include:
>
> Used QRP gear.
> CW keys and keyers.
> Portable HF antennas.
> QRP books.
> Gell cells/chargers/solar cells.
> Workbench supplies/soldering stations.
> Parts for homebrew (transistors, var caps, PCB stock)
> Crystals near QRP frequencies.
>
> Please pass along:
> 1. Call or Business name.
> 2. Hamvention space #.
> 3. Description of items.
>
> 73,
> Mike
>
> --
> Michael Ostrowski - KI8IK
> Saline, MI
>
> KI8IK@arrl.net
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.
>

--
Michael Ostrowski - KI8IK
Saline, MI

Sent via Deja.com http://www.deja.com/
Before you buy.

3938. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: dennis@wawa.juniper.net
Message-ID: <8fpmn3$250u$1@heap.juniper.net>
Source record: 60593
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

Peter O. Brackett <ab4bc@ix.netcom.com> wrote:
>In recent years we have such "amateurs" as...
>
>Phil Karn KA9Q...
>
> who almost single handedly introduced the Internet's TCP/IP protocol suite
>to the modern personal computer [IBM clones as opposed to the Unix based
>computers] by the release of his "KA9Q" TCP/IP "stack" as free ware. Many

That might be stretching it. I think MIT's PCIP predated the KA9Q software,
and probably had a larger base of commercial derivatives before CPU speeds
outgrew them.

But look at RFC 1122 for references to the "Karn algorithm" for computing
more accurate round trip time estimates for TCP. I think there is an
ACM SIGCOMM paper referred to in there. I'm pretty sure this came out of
the work with amateur radio TCP/IP (a lot of the really good, fundamental
insights into TCP protocol dynamics in the 1980's came from the experience
of running TCP over the really crappy networks that existed then).

Dennis Ferguson

3939. Re: Testing crystals ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8fppbe$c8u$1@lola.ctv.es>
Source record: 60594

Have a look at http://www.alphalink.com.au/~parkerp/noapr97.htm

and

http://www.qsl.net/vk4hdb/homebrew.htm

Those should point you in the correct direction

73 de Colin

Duffer wrote in message <391F304A.DE1CFD25@ica.net>...
>Looking for a test circuit for crystals (wideband oscillator ?)..
>Anyone ? Please reply to hduff@ica.net
>

3940. Re: Society of Amateur Radio Programmers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: John Miles <jmiles@pop.removethistomailme.net>
Message-ID: <39206DB0.39B4@pop.removethistomailme.net>
Source record: 60595

David Johnson wrote:
>
> now forming
>
> http://www.geocities.com/kb5ylg

Looks like a neat idea -- will check it out! However, please move it
off of geocities. It looks amazingly unprofessional to have those goofy
Javascript ads popping up all over the place. This type of application
is exactly what http://www.qsl.net is for.

-- jm

---
http://www.qsl.net/ke5fx
Note: My E-mail address has been altered to avoid spam

3941. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <39209B48.A853BEB3@agilent.com>
Source record: 60596

fretman_2@my-deja.com wrote:

> BTW...what is spurious responses???

Dunno if someone might have already answered this in another sub-thread, but here goes:

Ideally, if you put in a local oscillator (LO) at 10.123MHz, that mixes 10.123MHz RF input to DC, and you hear 10.122 as a 1kHz tone, and also 10.124 as 1kHz, etc. And since 10.143 mixes to 20kHz, you don't hear that at all. And you don't hear anything else at, 'cept what's input between 10.103 and 10.143, spread out over the 20kHz audio range. Things beyond that are beyond your hearing.

But what actually happens is "higher order mixing products" -- a key one you'll hear about is "third order" products, and "third order intercept." So for example, if the input to your mixer (same LO as above) includes a strong signal on 10.500MHz and another strong signal on 10.880MHz, your mixer will put them together resulting in some (hopefully small) signal effectively at 10.500MHz minus (10.880-10.500) or 10.500-0.380 or 10.120MHz...and you hear a 4kHz tone because of that. Obviously, if those signals are modulated, you hear the modulation too. That's a spurious response...one that isn't supposed to be there but is. You can find lots of articles on what third-order intermodulation is and how to measure it. I'm sure there must be ones on the web. And you can find mixers with "third order intercept" points over a range from maybe a tenth of a milliwatt for inexpensive mixers (and/or ones trying to run on very low power) up to maybe a kilowatt...which does NOT mean you can put a kilowatt into the mixer! (Go look up the articles for more info. There's way more to the story than is appropriate to put in a news posting.) The higher the TOI, generally the less the mixer will be bothered by "out of band" signals.

Cheers,
Tom

3942. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <39209F3B.F98697D6@agilent.com>
Source record: 60597

Roy Lewallen wrote:
> One thing -- If
> you do find the original article, don't use the 2N3565 I recommended. I
> later found out that its noise figure was terrible at that current, and
> that an ordinary 2N3904 and a number of other common transistors were
> much better.

A couple years ago, I experimented with Roy's circuit, and found that a 2N2222 gave very good noise results, better than any other common NPN transistor I could get my hands on. PNPs typically have lower noise figures than NPNs but not lower voltage noise, from what I could determine, and it's voltage noise that's critical in this circuit.

But I also found that you can get just about as good a noise figure (and FAR lower distortion) using an op amp with really low noise such at the Analog Devices AD797. The '797 is undoubtedly better in the noise department than the 2N3565, and probably at least equal to the 2N3904, and only very slightly worse than the 2N2222s I tested. There are other less expensive audio op amps that have pretty respectably low voltage noise, too.

FWIW, I've never seen a reason to design the amplifier itself to have a low input impedance; the critical thing is that the amplifier have extremely low voltage noise, referred to its input. Whether the amplifier or an external resistor is the load seems irrelevant. But having a proper load on the mixer IS important, whether it's the amplifier stage or a resistor. And it's also a very good idea to have a filter to keep RF out of the audio amplifier input. Remember that the mixer output will generally include stuff from DC on up. I personally rather like the idea of a 50 ohm resistive load on the mixer, feeding into a singly terminated LC filter to kill the RF, that feeding the (low voltage noise but relatively high input impedance) audio amp input. (I gather from some Watkins-Johnson info that terminating the mixer into a short circuit for out-of-band signals is not necessarily a bad thing...but I'm sure no expert in that area.)

Cheers,
Tom

3943. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3920A105.95533E1C@agilent.com>
Source record: 60598

I'd sure agree that a transformer makes a lot of sense if you're going
to use something as noisy as a 741 (or the unspecified Radio Shack
amplifier). FWIW, Mouser (www.mouser.com) have a good selection of
inexpensive audio transformers. There's a 4.6k (ct) to 20 (ct) that
should work well, for only $1.73. I admit to a personal preference to
go the amplifier route with no transformers, but with parts with
seriously low voltage noise, which a 741 will simply never do.

Cheers,
Tom

Hamm4fun wrote:
>
> >>An audio matching transformer from 50 to 5000 ohms will step up the
> >>voltage by only 10 times.
> >
> >A 10 times voltage step up is 20 dB and this case the performance of
> >the receiver is more or less dictated by the internal noise of the
> >audio amplifier, thus, not using the transformer will degrade the
> >signal to noise ratio by nearly 20 dB, not an insignificant number
> >even at lower HF, even though the background noise is still pretty
> >high.
> >
> >
> >>In this day and age don't even think about winding 1000's of turns of
> >>almost invisible wire on tiny mu-metal laminations. Just put an extra
> >>transistor or 741 op-amp before or after the audio amplifier.
> >
> >Sure you can connect two 741's in series, each with a voltage gain of
> >100, but the output will be saturated with the noise from the first
> >amplifier, even without anything connected to the input.
> >
> >The point is that you should use as much of the available signal power
> >as possible, thus, the amplification in the audio amplifier can be
> >reduced, reducing the internally generated noise contribution to the
> >output signal.
> >
> >Paul OH3LWR
> >
> >
> >
> >
> >
> >
> >

> >
>
> Right you are Paul. The 741 will contribute about 5 millivolts of noise which
> will be amplified by the next stage. The poster had the right idea to start
> with. Instead of looking for a 50 to 5k transformer he should be looking for
> about anything with this ratio. Even a mic 10k to 600 ohm transformer would
> help a lot. If amplify he must I would go with a single FET per stage instaed
> of the op amp. They are a lot less noisy. Of course there are less noisy opamps
> than the 741.

3944. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fpu5j$q7a$1@uranium.btinternet.com>
Source record: 60599

But I repeat - don't even think about winding thousands of turns on
a tiny bobbin with a mu-metal core with fine wire you have great
difficulty in seeing.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========

3945. Re: Society of Amateur Radio Programmers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-15 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fpus5rsv1@uranium.btinternet.com>
Source record: 60600

It would be of use if you gave readers some idea of what, at the very least, you are programming.

I am becoming tired of getting dragged up blind alleys only to be dumped.

Anyway, who wants to get mixed up with somebody far too lazy to say in a couple of words what it's all about.
--
Reg, G4FGQ
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
David Johnson <kb5ylg@gte.net> wrote in message
news:UeXT4.327$xM5.115953@dfiatx1-snr1.gtei.net...
> now forming
>
> http://www.geocities.com/kb5ylg
>
>

3946. 2 transistor FM broadcast receiver - is it a joke?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <39210a03@news.alphalink.com.au>
Source record: 60601

Published on page 300 of the April 2000 issue of Electronics World is a 2 transistor
FM broadcast receiver. It is not a super regenerative set. Instead the circuit claims
to be a synchronised oscillator that claims to recover the audio from FM broadcast
stations (direct conversion on FM???).

It is very simple - 2 transistors, 1 resistor, 1 capacitor and a tuned circuit. I have
never seen anything so simple for FM reception.

I couldn't get mine to oscillate or to receive signals. However given that it's the April
issue, I am open to the possibility that it could be an April Fool joke.

Has anyone built the circuit, and got it working?

73,

--
Peter Parker VK3YE

3947. -12V from +12V

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <392096a6.86837464@news.azstarnet.com>
Source record: 60602

I have need for 12V @ 200 mA or so to run some relays and furnish a small negative bias in a mobile environment. Regulation is not too important.

Does anyone have a minimum parts count solution, preferably a modern IC with minimial inductance requirements.

Thanks

Wes Stewart N7WS

3948. Re: -12V from +12V

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <39184839.639E@nbnet.nb.ca>
Source record: 60603

Howdy Wes.....must be something I'm missing here....do you need -12vdc
with respect to the mobile environment chassis or just -12vdc supply for
a piece of gear floating....if so just wire it up and let it float.
Maybe a little more info might help (at least for me LOL)

Gord - VE1AJF

3949. ** FLEA at MIT ** Sunday May 21st Cambridge MA

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: w1gsl@mit.edu
Message-ID: <3920a0f0$0$10885@senator-bedfellow.mit.edu>
Source record: 60604
Cross-posted to: rec.radio.swap,rec.radio.amateur.misc,rec.radio.info,sci.electronics.misc,ne.forsale,ne.general,rec.radio.amateur.homebrew,rec.radio.amateur.boatanchors

Subject: ** FLEA at MIT ** Sunday May 21st Cambridge MA
Summary: Buy Sell SWAP Ham Radio Electronics Computers 9AM - 2PM

This coming Sunday...

*** !!!! In our Traditional GARAGE and lot !!!! ****
so come rain or shine or super heat the Flea is on !!!

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FLEA all SUMMER at MIT
Sunday May 21st 2000
9AM-2PM

Come to the city for a great flea - plenty of free parking.

MIT's electronics and ham radio flea will take
place on the third Sunday of each month this summer,
April thru October.

There is tailgate space for over 600 sellers and
free, off-street parking for >2000 cars!

Buyers admission is $4 (you get $1 off if
you're lucky enough to have a copy of our ad)
and sellers spaces are $10.00-each at the gate.

The flea will be held at the corner of Albany and
Main streets in Cambridge; right in the Kendall
Square area from 9AM to 2PM, with sellers set-up
time starting at 7AM.

*** Attention Sellers ***
Prepaid vendors.. Season Pass or monthly,
will be admitted FIRST.
Separate lines will form prior to gate opening
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!! RAIN or SHINE !! Have no fear of rain, a covered
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MIT UHF Repeater Association (W1XM)
MIT Radio Society (W1MX)
Harvard Wireless Club (W1AF)

For more info / advanced reservations 617 253 3776

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E-Mail .....

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___ Aug ____ Sept ___ Oct

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By ..... Stamp

Enclose SASE for return by mail.

****
Steve Finberg W1GSL w1gsl@mit.edu
PO Box 82 MIT Br Cambridge MA 02139-7082 617 258 3754
****

3950. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3920C38E.EA265C97@webaxs.net>
Source record: 60605
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I have figured out how to guarantee stability, and a garden-variety
BC548 works good.

J M Noeding wrote:
>
> On Mon, 01 May 2000 11:00:28 +1000, "Russ.Shaw" <russell@webaxs.net>
> wrote:
>
> >I wanted to make the if strip using standard 455kHz if-transformers,
> >and more gain with fewer stages can be got at lower frequencies. I
> >can get 35-40dB gain from a BC548 transistor at 1mA using transformers,
> >and they're easier to get and have a nicer agc characteristic than ics
> >i know of.
> >
> BF199 is better for tuned stages considering stability

--

****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3951. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3920C3C8.C7A9FF03@webaxs.net>
Source record: 60606
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

Are these ICs linear amps, or limiting FM types?

NANCY GIANAKOPOULOS wrote:
>
> The TDA1072 or the TDA1572 have very good AGC characteristics, require no
> transformers at the IF input, and provide around 80dB of gain. The
> demodulated audio is so clean, that when I was demonstrating one of my
> radios to a fellow the other day, he thought I was using synchronous
> detection!
>
> Pete Gianakopouloos
>
> J M Noeding <LA8AK@online.no> wrote in message
> news:391d0fdf.120580548@news.online.no...
> > On Mon, 01 May 2000 11:00:28 +1000, "Russ.Shaw" <russell@webaxs.net>
> > wrote:
> >
> > >I wanted to make the if strip using standard 455kHz if-transformers,
> > >and more gain with fewer stages can be got at lower frequencies. I
> > >can get 35-40dB gain from a BC548 transistor at 1mA using transformers,
> > >and they're easier to get and have a nicer agc characteristic than ics
> > >i know of.
> > >
> > BF199 is better for tuned stages considering stability

--

* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *

3952. Re: 2 transistor FM broadcast receiver - is it a joke?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3920CA37.5F482003@webaxs.net>
Source record: 60607

The injection-locked oscillator will follow the fm of the strongest near-by
signal. Then you could feed the resulting strong fm osc signal into some kind
of discriminator. Haven't seen the article yet.

Peter Parker wrote:
>
> Published on page 300 of the April 2000 issue of Electronics World is a 2
> transistor
> FM broadcast receiver. It is not a super regenerative set. Instead the
> circuit claims
> to be a synchronised oscillator that claims to recover the audio from FM
> broadcast
> stations (direct conversion on FM???).
>
> It is very simple - 2 transistors, 1 resistor, 1 capacitor and a tuned
> circuit. I have
> never seen anything so simple for FM reception.
>
> I couldn't get mine to oscillate or to receive signals. However given that
> it's the April
> issue, I am open to the possibility that it could be an April Fool joke.
>
> Has anyone built the circuit, and got it working?
>
> 73,
>
> --
> Peter Parker VK3YE

--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

3953. Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: WA2FSO <wa2fso@bellatlantic.net>
Message-ID: <9Z9U4.8811$gl2.304855@typhoon1.ba-dsg.net>
Source record: 60608
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

i have a Alinco DX 70t with the edx-2 auto tuner, I am running this in a 1991 Chevrolet Caprice v-8. The problem is ignition noise. Its been a problem with every radio install. My dads car, also a 1991 Caprice has the same problem. Were using resistor plugs. I need suggestions on how to rid the car of this noise, have one filter in line, still doesn't solve problem. noise is about 5-9 and s9 on am.
Has anybody else had these issues with the Caprice & or GM Cars? any help or advice appreciated.

3954. Re: -12V from +12V

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <39215C98.D62D8E04@home.com>
Source record: 60609

You can 1) Use an LM2574 or similar voltage regulator as an inverter (see the Nat Semi web pages.) - it requires the IC, a couple caps, an MBR type diode and an inductor. The formulas to derive component values are on their website.

2) Check out the web pages of NatSemi, Tex Instruments (now includes Unitrode), Motorola (now ON Semiconductor) for flyback regulators - these require a transformer, but you know where to go from there.

Wes Stewart wrote:

> I have need for 12V @ 200 mA or so to run some relays and furnish a small
> negative bias in a mobile environment. Regulation is not too important.
>
> Does anyone have a minimum parts count solution, preferably a modern IC with
> minimial inductance requirements.
>
> Thanks
>
> Wes Stewart N7WS

3955. Re: Question: Innovation in Amateur Radio

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "Robert A. Poff" <wb3awj@blazenet.net>
Message-ID: <3921462B.6650CB04@blazenet.net>
Source record: 60610
Cross-posted to: rec.radio.amateur.policy,rec.radio.amateur.misc,rec.radio.amateur.digital.misc,rec.radio.amateur.homebrew,rec.radio.amateur.space,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.dx,rec.radio.amateur.antenna

As I remember Phil Karn introduced TCP/IP for amateur radio at one of
long gone Mid-Atlantic Packet Radio Council meetings.... (the one held
in Savage, MD). I can't put a year on it. But at the time the TNC-2 was
rumored but not yet a reality.

It was an amateur radio adaptation of the existing TCP/IP. Just as AX.25
was
an amateur radio utilization of the existing X.25 transfer protocol.

However, I think Phil did a lot of development for TCP/IP in his job
(memory wants to say that he worked for Bell but I may be wrong)

If I root around in the attic I might be able to find the diskette
he gave out that day.

But going on from here....
While packet radio was what we could call a "reverse" development in
amateur radio, meaning something we adapted, it sure did open the door
for commercial development of mobile data services.

Bob Poff WB3AWJ
Engineer WSBA/WARM-FM

Dennis Ferguson wrote:
>
> Peter O. Brackett <ab4bc@ix.netcom.com> wrote:
> >In recent years we have such "amateurs" as...
> >
> >Phil Karn KA9Q...
> >
> > who almost single handedly introduced the Internet's TCP/IP protocol suite
> >to the modern personal computer [IBM clones as opposed to the Unix based
> >computers] by the release of his "KA9Q" TCP/IP "stack" as free ware. Many
>
> That might be stretching it. I think MIT's PCIP predated the KA9Q software,
> and probably had a larger base of commercial derivatives before CPU speeds
> outgrew them.

3956. WTB Dayton Leftovers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: mvgjr1@mvgsa.mv.lucent.com
Message-ID: <8frjrd$d71@nntpb.cb.lucent.com>
Source record: 60611
Cross-posted to: rec.radio.swap,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew

At Dayton. Outside exibitor #729
Don't want to bring that radio home?
Looking to buy (at the right price!)
Everyday 4-5 PM and most of the day
on Sunday. Working or Broken!
Also, may have some room to bring back
your goodies to New Hampshire for you
lucky Flyers!
73' See you there!!!
Greg, KA1INX
RECYCLED RADIO
www.recycledradio.com

3957. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: A 'n' A <saciuk@freenet.edmonton.ab.ca>
Message-ID: <3921555D.59A70D59@freenet.edmonton.ab.ca>
Source record: 60612
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I haven't had that experience with ham radios, however I did at one point get nasty ignition noise on the car stereo. I have a '75 Dart (V-8, of course), and what I did, is install
8.8mm Accel Spark Plug Racing wires. They're supposed to keep more of the electrical energy inside their heavier insulation, so you will have better RF suppression (and more juice getting to your plugs!) Hope it helps!

Andrew
VE6SCK

WA2FSO wrote:

> i have a Alinco DX 70t with the edx-2 auto tuner, I am running this in a
> 1991 Chevrolet Caprice v-8. The problem is ignition noise. Its been a
> problem with every radio install. My dads car, also a 1991 Caprice has the
> same problem. Were using resistor plugs. I need suggestions on how to rid
> the car of this noise, have one filter in line, still doesn't solve problem.
> noise is about 5-9 and s9 on am.
> Has anybody else had these issues with the Caprice & or GM Cars? any help or
> advice appreciated.

3958. Re: -12V from +12V

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39215909.CE88F209@midwestmicro-tek.com>
Source record: 60613

Wes Stewart wrote:

> I have need for 12V @ 200 mA or so to run some relays and furnish a small
> negative bias in a mobile environment. Regulation is not too important.
>
> Does anyone have a minimum parts count solution, preferably a modern IC with
> minimial inductance requirements.

Try the TC7662B from Telcom (and others). It will invert 1.5v to 15 volts and it only uses two 10uF caps, no inductors needed. You can get it from digi-key.

Rick

>
>
> Thanks
>
> Wes Stewart N7WS

3959. Re: -12V from +12V

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <392164a0.50958402@news.azstarnet.com>
Source record: 60614

On Tue, 16 May 2000 00:56:09 GMT, Gord Skiffington <skiffing@nbnet.nb.ca> wrote:

>Howdy Wes.....must be something I'm missing here....do you need -12vdc
>with respect to the mobile environment chassis or just -12vdc supply for
>a piece of gear floating....if so just wire it up and let it float.
>Maybe a little more info might help (at least for me LOL)
>
>Gord - VE1AJF

I guess I was too brief. I'm putting together a 2 meter h-f transceiver/transverter station that will be for both portable (travel trailer) and home use.

Rather than two different setups, I want the low power (<100W) portion to run entirely on 12V. The home station runs an 8877 amp and antenna mounted Transco 24-28V relays (and I might use some more portable) so I need to manufacture an additional 12V. In addition, part of the sequencing will use negative bias back to the h-f transceiver ALC system to insure all of the relays are switched over before generating transmit power.

So, in my mind anyway, the simplest system is an additional -12V supply, stacked with the existing +12V to run the relays and supply the negative bias regulator.

Wes N7WS

3960. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8frr97$7om1@icet.net.nih.gov>
Source record: 60615

Paul Keinanen (keinanen@sci.fi) wrote:
: On Sun, 14 May 2000 18:26:13 +0100, "Reg Edwards"
: <G4fgq.Regp@btinternet.com> wrote:
:
: >I think automatic tuning of the local oscillator for receiving
: >suppressed carrier is impossible. There is nothing to lock on to.
:
: I do not know about speech, but music contains a lot of signals that
: have a rich harmonic contents e.g. 100 Hz fundamental with 200 Hz, 300
: Hz, 400 Hz etc. harmonics. On SSB with +10 Hz error, these tones are
: at 110, 210, 310, 410 Hz etc. which are no longer harmonically
: related. Some DSP algorithm might try different frequency offsets in
: order to produce harmonically related output tones.

This is the approach that I have heard, but I have not heard of
anyone actually trying to implement it. There are other possible
methods. For example, you can connect the output to a
speaker-independent voice recognition system and tune to the
maximum number of word hits.

:

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
Laboratory of Systems Neuroscience
Section on Neurophysiology
National Institute of Mental Health
Bethesda, Maryland 20892-4401

3961. Re: 2 transistor FM broadcast receiver - is it a joke?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8frrg7$7om2@icet.net.nih.gov>
Source record: 60616

Peter Parker (parkerp@alphalink.com.au) wrote:
: Published on page 300 of the April 2000 issue of Electronics World is a 2
: transistor
: FM broadcast receiver. It is not a super regenerative set. Instead the
: circuit claims
: to be a synchronised oscillator that claims to recover the audio from FM
: broadcast
: stations (direct conversion on FM???).

This is possible, but not as efficient as super regen. See my web page
for a description of each method and my design for a "One transistor FM receiver",
which actually uses one transistor and one 3 terminal shunt regulator.
It is an excellent performing radio.

:
: Has anyone built the circuit, and got it working?
:
: 73,
:
: --
: Peter Parker VK3YE
:
:

Andy Mitz WA3LTJ
Collector of FM only radios
www.somerset.net/arm/fm_only.html

3962. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fru89$h2s$1@nnrp1.deja.com>
Source record: 60617

Hey Roy:

It's a diode ring type double balance mixer. I still get BCQRM on 40m
but it seemed to get worse when I tuned to 30m?? I used either #22 or
26 wire....can't remember....to wind the FT37-43 toroids...trifilliar.

Bill

In article <391FC24B.CF7ADFC8@eznec.com>,
Roy Lewallen <w7el@eznec.com> wrote:
> It's interesting you mention the broadcast band QRM. If it doesn't
> change as you tune the receiver, it's due to AM demodulation. This is
a
> real problem in direct conversion receivers, and can be minimized only
> if you have good mixer balance. One of the keys to this is proper
mixer
> termination. Both Rick's and my articles talk about this issue, and
the
> best mixer either of us has found for DC receivers is a diode ring.
>
> Roy Lewallen, W7EL
>
> fretman_2@my-deja.com wrote:
> >
> > Thanks Roy for the advice. I did put a 50 ohm resistor across the
> > terminals of the audio port and it helped considerably!! The noise
> > came down, CW signals came up and strangely the broadcast band QRM
went
> > way down...this on 40m! I can plainly copy CW at 7.040. When I
power
> > down the VFO and leave the audio amp on the broadcast band
interference
> > comes back up?!?!
> >
> > I'll look for the circuit you're talking about. I'm also
considering a
> > 741 op amp as a pre-amp but I'll have to find a relatively noiseless
> > one. I also plan to build an active CW filter too.
> >
> > The nice thing about it all is that the VFO is a module, the DBM is
a
> > module so it makes it easier to experiment.
> >
> > I should say thanks here to everyone that's helped me!!!!
> >

> > Happy Mother's Day Everyone.
> >
> > Bill
> > KD4PWB
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3963. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8frujp$hm7$1@nnrp1.deja.com>
Source record: 60618

I did follow the advice from an earlier post in this thread and
connected then disconnected the antenna. The noise went down to almost
nothing after disconnecing the antenna...so I believe the little audio
amp is probably doing a FB job. I'll get the notation off of the chip
in the amp and let you guys know what it is.

I sure appreciate the post from all of you and I'm learning alot.

Bill

In article <39209F3B.F98697D6@agilent.com>,
Tom Bruhns <tom_bruhns@agilent.com> wrote:
>
>
> Roy Lewallen wrote:
> > One thing -- If
> > you do find the original article, don't use the 2N3565 I
recommended. I
> > later found out that its noise figure was terrible at that current,
and
> > that an ordinary 2N3904 and a number of other common transistors
were
> > much better.
>
> A couple years ago, I experimented with Roy's circuit, and found that
> a 2N2222 gave very good noise results, better than any other common
> NPN transistor I could get my hands on. PNPs typically have lower
> noise figures than NPNs but not lower voltage noise, from what I could
> determine, and it's voltage noise that's critical in this circuit.
>
> But I also found that you can get just about as good a noise figure
> (and FAR lower distortion) using an op amp with really low noise such
> at the Analog Devices AD797. The '797 is undoubtedly better in the
> noise department than the 2N3565, and probably at least equal to the
> 2N3904, and only very slightly worse than the 2N2222s I tested. There
> are other less expensive audio op amps that have pretty respectably
> low voltage noise, too.
>
> FWIW, I've never seen a reason to design the amplifier itself to have
> a low input impedance; the critical thing is that the amplifier have
> extremely low voltage noise, referred to its input. Whether the
> amplifier or an external resistor is the load seems irrelevant. But
> having a proper load on the mixer IS important, whether it's the
> amplifier stage or a resistor. And it's also a very good idea to have
> a filter to keep RF out of the audio amplifier input. Remember that

> the mixer output will generally include stuff from DC on up. I
> personally rather like the idea of a 50 ohm resistive load on the
> mixer, feeding into a singly terminated LC filter to kill the RF, that
> feeding the (low voltage noise but relatively high input impedance)
> audio amp input. (I gather from some Watkins-Johnson info that
> terminating the mixer into a short circuit for out-of-band signals is
> not necessarily a bad thing...but I'm sure no expert in that area.)
>
> Cheers,
> Tom
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3964. Re: IRF510

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8fs18l$kn3$1@nnrp1.deja.com>
Source record: 60619

Yes I'd be interested more in the single MOSFET PA too. I'd like to
keep it 5 watts or under.

Bill
KD4PWB

In article <392011EA.51D7@imag.fr>,
Laurent CHABERT <Laurent.chabert@imag.fr> wrote:
> Hello I am a french om and i am also interested about:
> >suitable schematic for a 5w IRF510 power amp??
> I think the CENTENNIAL KIT is working with MTP3055E but I d'ont have
any
> schematics about it and I would be very interested about it IF someone
> can forward it to me.
>
> I have the links:
>
> PA with mosfet:
> http://www.qsl.net/ei9gq/80pa.html
>
> The Centennial 80-meter SSB/CW QRP transceiver:
> http://www.natworld.com/ars/pages/back_issues/0598_%7Ftext/cent.html
>
> Laurent (F4 AER from FRANCE)
>

Sent via Deja.com http://www.deja.com/
Before you buy.

3965. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1605001348530001@dialup-1080.hip.cam.org>
Source record: 60620

In article <39200EDB.F4CBBFAA@midwestmicro-tek.com>,
rhaub@midwestmicro-tek.com wrote:

> I might be thinking of a different kind/manufacturer of tubes but I remember
> something about sub-mini tubes being developed for use in space rockets.
They had
> to be small, low power, and above all they had to be shock proof. Maybe these
> were the ones?
>
> Rick KC0GIX
>
There were sub-miniature tubes, though it's been a long time since I
saw any. They were glass, and had wire leads coming out one end. The
ones I'm thinking of had the leads in a straight line, but thinking about
it now, I thought thee were also some that had the leads in a circle.
Many or all of them had directly heated cathodes. I'm not sure what
made that design decision. I"m not sure what they were created for in
the first place, other than for miniaturization. I think they dated
before the space age, and may have seen use first in military applications.
In consumer items, they appeared in hearing aids, and some portable
radios.

Nuvistors were metal encased, and were about the diameter of a small
finger, maybe about the same height as to the first joint. It's been
a while, but I remember them having leads in an odd pattern. A mini-DIN
connector (like you see on Macintosh computers) reminds me of about
the size and lead arrangement.

MichAel VE2BVW

3966. Re: 2 transistor FM broadcast receiver - is it a joke?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1605001352280001@dialup-1080.hip.cam.org>
Source record: 60621

In article <39210a03@news.alphalink.com.au>, "Peter Parker"
<parkerp@alphalink.com.au> wrote:

> Published on page 300 of the April 2000 issue of Electronics World is a 2
> transistor
> FM broadcast receiver. It is not a super regenerative set. Instead the
> circuit claims
> to be a synchronised oscillator that claims to recover the audio from FM
> broadcast
> stations (direct conversion on FM???).
>
> It is very simple - 2 transistors, 1 resistor, 1 capacitor and a tuned
> circuit. I have
> never seen anything so simple for FM reception.
>
> I couldn't get mine to oscillate or to receive signals. However given that
> it's the April
> issue, I am open to the possibility that it could be an April Fool joke.
>
> Has anyone built the circuit, and got it working?
>
I saw the circuit (and for others, it's not an article but a schematic
and a very brief description), but didn't buy the magazine. It did
remind me of a circuit I saw in Elektor years ago, which I can't put
my hands on at the moment. I've seen mention of the idea somewhere.
So whether or not that particular circuit works, the idea supposedly
is sound.

Michael VE2BVW

3967. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1605001401100001@dialup-1080.hip.cam.org>
Source record: 60622

In article <391e677d.208559464@news.online.no>, LA8AK@Online.NO wrote:

>
> it was an AFC circuit mentioned in Radcom 20 years ago, based on some
> ideas for Collins 51-S or similar receiver. believe it was originally
> described in QST, it uses AM envelope detector as well as product
> detector. Once hooked it up on my 2m transceiver, but it was too
> little and only random ssb activity for alignment, so I never got it
> operational

I once saw the book put about by Collins (and later reprinted by
Ham Radio magazine) about SSB, and I seem to recall something in
there about AFC for SSB. Someone who has the book might want to
check because I remember none of the details.

About 1964, there was an article in 73 about AFC for SSB and it
used a discriminator. It didn't quite explain how it worked, and in
the end, I think it was based on a leaky carrier, which at that
time might have been a more common occurance than nowadays.

Of course, as we've gone through here before, a DSB signal with
suppressed carrier includes information for placing the carrier
right in the required place. That begs the question, which is
a better tradeoff? A weak carrier sent along for the purposes
of locking the BFO, or sending two sidebands without a carrier?

Michael VE2BVW

3968. Standard C178S modifications

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "richardappleton@dial.pipex.com" <ynm53@dial.pipex.com>
Message-ID: <8fs6gq$aa3$1@lure.pipex.net>
Source record: 60623

Does anyone have the mods for Standard C178S to allow additional frequencies
to be covered?

Thanx

Richard

3969. FS: Rf comps for builders (long)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <3921A1C1.C8796614@valley.net>
Source record: 60624

Hello-- Revised -05/16/2000

I'm offering homebrew builders the following NOS (new old stock) RF components, including...
***
Hewlett-Packard MSA-0786 MMICs ($1.00 each, $5.00 for 6, $10.00 for 15, or $25.00 for 50 pieces); DC-2 GHz. These are taped and reeled and have leads configured for surface-mounted applications.

Specs are available at HP's web site (or with your order)...

http://www.hp.com/HP-COMP/index.html
***
1N5453B Variable-capacitance diodes, full-length leads, taped and reeled. Nominal capacitance of 56 pf and Q of 200 at 50MHz and 4 VDC. $1.00 for 3 pieces.
***
1N5711 Schottky diodes, full-length leads, taped and reeled, $1.00 for 10
pieces
***
1N5817 Schottky rectifiers, full-length leads, taped and reeled, $1.00 for 10 pieces
***
1N5821 Schottky rectifiers, full-length leads, bulk packed, $1.00 for 8 pieces
***
PIN diodes, no specs available; full-length axial-leaded packages; individually serialized in sealed-foil envelopes. $1.00 each.
***
JAN 1N748A Zener diodes: individually sealed in mil-spec foil packets for your protection<g> in 1983.
$1.00 for 6 pieces.
***
SD-201 Signetics DC-2 GHz DMOS single-gate FETs four-lead TO-72 can (like TO-18 w/shield lead). A conductive-rubber antistatic "O" ring encircles
all four leads. Specs (available on request and with purchase) include S parameter plots. $1.00 each, $3.00 for 6, $5.00 for 12 pieces.
***
TN-2219A National Semiconductor NPN general-purpose NPN transistor: 100 < hFE < 300 at Ic= 150 mA; BVcbo = 75 V min.; BVceo = 40 V min.; Icbo = 10 nA max. at Vcb= 60 V; Cob = 8 pf max.; Ft = 60 MHz min. at Ic = 20 mA. NF 4 dB (max.)
In TO-237 metal-tabbed plastic package (similar to TO-92); this package

reduces thermal resistance from 125 C per watt for a TO-92 to 50 C per watt for the TO-237. Ideal for building a QRP rig around a single device!

$1.00 for 20 pieces; $5.00 for 120 pieces
***
Minicircuits T1-1T (1:1 turns ratio (center-tapped)) broadband RF transformers (80 KHz to 200 MHz); leads are formed for surface mounting but you can rebend for DIP insertion. Visit www.minicircuits.com for full specs via their catalog.
$2.00 for 3 pieces
***
Minicircuits PSCQ-2-400 90-degree, 2-way power divider, 0.9 dB insertion

loss, 225-400 MHz; $1.00 each
***
Fair-Rite cores (both type 43 mix):

2643023002 (a long-cored toroid) $1.00 for 10 pieces
2843002402 (binocular (balun) core) $1.00 for 20 pieces
***
Coilcraft p/n 142-07J08 single-winding adjustable inductors.
330 nH min./ 378 nH nom. /427 nH max.; 307 nH with tuning slug removed. Q is 112 min. at 40 MHz; 7.5 turn winding on 10 mm molded form.

$1.00 for 5 pieces; $5.00 for 35 pieces.
***
Chip Inductors: Coilcraft 1008CS family-- 10 by 8 mils, ceramic construction. Full specs are available at www.coilcraft.com

Coilcraft 1008CS-270XMBC 27 nH +/- 20 percent
Coilcraft 1008CS-470XMBC 47 nH +/- 20 percent

Coilcraft 1008CS-680XKBC; 68 nanohenry, +/- 10 percent, Q(min)=65 @ 350 MHz, self-resonant frequency of 1300 MHz minimum, Rdc = 0.2 ohms max., 1 ampere DC max.

Coilcraft 1008CS-332XKBC 3300 nH +/- 10 percent

$1.00 for 8 pieces of one value or any mixture of values

***
RF power xfmr.: consists of two 1.125-inch long by 0.570 inch OD type 43 ferrite sleeves with tubing primaries. Two small circuit boards short one end of the tubes, and the other two are not connected.

A section of Teflon (tm)-insulated wire passes through both tubes' centers twice, making a 1:2 turns ratio (1:4 impedance) stepup transformer (you can easily remove this winding and replace it with more turns of smaller gauge) At a (nonguaranteed) guess, the assembly might handle 100 watts of RF. The cores are .

Price: $1.50 each (scanned image available on request)

***
Pulse Engineering PE-53190 toroidal inductor for switched-mode power
supplies.
Inductance = 12.2 microhenries at zero DC; 8.7 microhenries at 2.5 A DC.

Price: $1.00 for 6
***
SAW-stabilized oscillators; intended for ECL circuits, but also
reportedly usable as LOs. All are packaged in metal DIP cans.
$4.00 each, or three assorted for $10.00

Frequencies available are:
222.222 MHz (RF Monolithics HC1279; proprietary p/n marking)
350.000 MHZ (RF Monolithics HC1301)
366.667 MHz
400.000 MHz ($2.00 ea. but NOT NOS; removed from PC boards)
733.333 MHz
***
Teflon- and diallyl-pthalate insulated single-point turret lugs at
$12.00 per 100 (many styles available-- e-mail for information and a
jpg image showing various types).
***
Global Specialties Experimentor (tm) PC board EXP-300PC; use one
of GS' solderless breadboards to rough out your circuit, and then
build a final copy on one of these PC boards. $1.00 each, NOS in
carded shrinkwrap package.
***
Feedthrough capacitors: Spectrum Control 100 pf nominal (threaded
bushing mount, hardware included). Attenuation is specified as
-10 dB at 300 MHz, and -20 dB at 1 GHz.
$.50 each, $1.00 for 3 pieces. ***ONLY 32 PIECES REMAINING***
***
Air-variable capacitors manufactured by Cardwell (their part no.
PL6348).
NOS surplus, m'fd. sometime in the 1950s.
--Configuration: consists of two plates separated by 0.1";
--Estimated capacitance range: 1-5 pf.
The adjustment shaft is 0.25" dia. by 0.5 inches long; bushing or
isolated mounting; easily disassembled for capacitance vs. frequency
modification, etc. A more-detailed description is available on request.

Price: $1.00 each, $10.00 for 12 pieces
***
Caddock MS281N NONINDUCTIVE resistors:

10 ohm +/- 5 per cent tolerance, 8 watt noninductive power film
resistors
Tinned axial leads (0.75 inches long) are formed for PC-board
insertion on 1.2-inch centers. These are NOS, bulk-packed parts.
Note: these measure well within tolerance at +/- 0.2 ohms typical. Full
specs are available in PDF format on Caddock's web site
(www.caddock.com)

but highlights are:
--Temperature coefficient of resistance: 50 ppm;
--Power rating: 8 watts at 25 C, derating to 4 watts at 150 C and
0 watts at 275 C;
--Noninductive design: serpentine film layout cancels magnetic field-
equivalent inductance of a straight piece of wire of the
resistor's body plus lead length.

Applications include:
--Current sampling;
--Cathode bias;
--Dummy loads for audio and RF applications.

Price: $1.00 each ($10.00 for 12 pieces); only 50 pieces available
****
****
* NOS Warranty policy *
****
Scanned images or digital photos of components are available on request.

If you purchase NOS tubes or components and find them unsatisfactory
upon your inspection, notify me within seven days and return items in
as-received condition for a full refund or replacement (if available).

This material is subject to prior sale and is supplied as-is, as
new-old-stock (NOS) merchandise, with all responsibility for safe and
successful application residing solely with the purchaser.

If you're searching for oddball components of any vintage, don't
hesitate to inquire about availability.

****
* Shipping per order: *
****
Postage:

Add $4.00 for priority-mail shipment (U.S. only). Add $1.80 for
insurance on orders over $50.00.

Foreign purchasers: please inquire for shipping charges.

Please contact me to confirm availability and reserve components before
sending payments.

I accept payment via personal or cashier's check or money order drawn in
U.S. dollars and made payable to "Brad Thompson".

**********Available from:**********
Brad Thompson, AA1IP
P.O. Box 307, 202 Whitaker Rd.
Meriden, NH 03770-0307
Voice:(603) 469-3351
Fax: (603) 469-3917
E-mail: brad.thompson@valley.net

3970. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Jake Brodsky <frussle@erols.com>
Message-ID: <cc93isgmrlf3oi3rej0ntv55kt6aan9hp1@4ax.com>
Source record: 60625

On 14 May 2000 14:36:47 GMT, arm@helix.nih.gov (Andrew R Mitz) wrote:

>jos (soj@sympatico.ca) wrote:
>: My question! Does anybody know if cuircuits exist to automatically
>: generate the BFO frequency (Carrier Regeneration) for SSB detection in a
>: multiplier (or product detector); has any researcher tried to do that?
>: With today's synthesizers, is it possible to generate the IF frequency
>: with enough precision so that the SSB carrier regeneration (BFO) is
>: close enough for the audio to be comprehensible. Is automatic control of
>: the BFO a desired objective. How many hertz must the BFO be from the
>: suppressed carrier for intelligible audio? Thanks!

So many questions! Here's what I can pass along: Somewhere along the way, you need a reference to lock on to if you don't want any frequency offsets in SSB.

Some have used a technique known as ACSSB. I don't remember exactly what the letters stood for. It may have been Amplitude Compandered Single Sideband. It used a pilot tone to establish an AGC and frequency reference. The only problem with this method is the similar to what one would find on Shortwave AM broadcasts. If selective fading hits the pilot tone, you're screwed.

ACSSB used the reference to steer the BFO so that it was on frequency for the incoming signal.

Another method used DSB with suppressed carriers. Look up the Costas Loop circuit if you want to know how most ICs and high performance circuits do this. This arrangement is a bit more durable than AM during severe cases of selective fading.

However there is an even easier system available to almost anyone these days. If your receiver has the ability to accept a frequency reference (and many do), then get a frequency reference from a common source such as WWVB or even a GPS based atomic standard. These standards are extremely accurate. Once you're locked on, you'll know your frequency to an accuracy of less than one cycle per second. If you coordinate with other stations in advance, you'll be exactly on frequency without having to send any extra synchronization information.

Those are just a few ideas. Once you start investigating, I'm sure you'll think of others...

73,

Jake Brodsky, AB3A mailto:frussle@erols.com
"Beware of the massive impossible!"

3971. How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Daniel Hopkins <dhopkins@echezabal.com>
Message-ID: <#N16vW3v$GA.240@cpmsnbbsa04>
Source record: 60626
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello and thanks in advance from a beginner.

I wanted to know how inexpensively one could buy or build a receiver (for any frequency), even a single frequency receiver.

I have limited experience with electronics but I do okay.

Thanks again.

Dan Hopkins

3972. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Jerry Oxendine <joxendi@bellsouth.net>
Message-ID: <3921C152.2233@bellsouth.net>
Source record: 60627
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Regarding ignition noise, it is hard to diagnose from a distance, but I'll try to give a pointer or two. I think it is unusual to have much ignition noise from a GM car, but it does happen with all vehicles from time to time.

1. Run all power leads direct to the battery.

2. Check all installation issues (antenna mount, coax for bad connect-ions, etc.

3. Ground the radio via shortest route to frame/body.

4. Make sure that the body has good ground to frame--might even run gnd straps to frame at both ends.

5. Make certain antenna mount is grounded/installed correctly.

6. Ground hood and trunk on both sides near the hinges.

7. Ground muffler(s) with braided straps to frame. (Welds often do not provide a good RF ground.

8. Remove antenna and see if noise is still present with whip off. If it is, it is RADIATED noise.

9. If it is radiated noise, then you have to find what is radiating the noise to the antenna. I once found that ignition noise was following the taillight harness back to the light bulbs and radiating the noise onto the antenna. So remove the light bulbs in the taillights and seeif it stops.

10. I have never seen any inline filter remove ignition noise. So in-stall caps across the alternator (for whine), and across the power leads for electric fuel pump (if any).

11. How long has it been since the plug wires were replaced?

These are just some of the things you can do to stop the noise. It may be something simple, or it may be hard to trace. Chevrolets are usually not very noisy, so I tend to think there is something amiss with the electrical system (plugs, wires, etc), or the rig/antenna is not in-stalled properly.

Good Luck,

Jerry
K4KWH

3973. Re: SSB DETECTION!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3921D81F.7DE712C1@sympatico.ca>
Source record: 60628

I was told by a Ham friend to investigate "Electronics & wireless world"
year 1970 and September issue of 1989. I am wondering if a reader of this
news group has these issues.
In any way I am going to contact the University library to see if they have
it. In the meantime, I would be interested by anyone having information on
the Analog Devices
DSP board which has a BFO, to see if the device can tune automatically or if
the operator "ear" is still neceaasary as the AFC. Regards!

Michael Black wrote:

> In article <391e677d.208559464@news.online.no>, LA8AK@Online.NO wrote:
>
> >
> > it was an AFC circuit mentioned in Radcom 20 years ago, based on some
> > ideas for Collins 51-S or similar receiver. believe it was originally
> > described in QST, it uses AM envelope detector as well as product
> > detector. Once hooked it up on my 2m transceiver, but it was too
> > little and only random ssb activity for alignment, so I never got it
> > operational
>
> I once saw the book put about by Collins (and later reprinted by
> Ham Radio magazine) about SSB, and I seem to recall something in
> there about AFC for SSB. Someone who has the book might want to
> check because I remember none of the details.
>
> About 1964, there was an article in 73 about AFC for SSB and it
> used a discriminator. It didn't quite explain how it worked, and in
> the end, I think it was based on a leaky carrier, which at that
> time might have been a more common occurance than nowadays.
>
> Of course, as we've gone through here before, a DSB signal with
> suppressed carrier includes information for placing the carrier
> right in the required place. That begs the question, which is
> a better tradeoff? A weak carrier sent along for the purposes
> of locking the BFO, or sending two sidebands without a carrier?
>
> Michael VE2BVW

3974. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3921E058.806A8501@agilent.com>
Source record: 60629
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hi Dan (and lurkers),

You bring back old memories. I got started in ham radio in a place where a lot of the kids had way less than I did, and I didn't have all that much. But one of the fellows who got his license when I got mine did quite well with some home-made equipment. He talked (on CW) 3000 miles across the country with a very simple transmitter and receiver. The receiver was a regenerative set with one or two tubes. We used to get parts from scrapped TV sets and radios. You can do the same sort of thing now with transistors. I'd be surprised if you couldn't get all the parts you need for free. If you were nearby, I'd gladly give you old boards with plenty of parts to do everything you need, except perhaps tuning capacitors, but hey, I'd even throw in something you could use for that if you were serious. I'll bet you can find 'lectronics 'sperimenters and the like in your area that will give you all sorts of stuff.

I've listened to broadcast stations from about 1000 miles away at night with a "crystal set." OK, I cheat: my "crystal" is a semiconductor diode, and I follow that with a simple audio amplifier. But you can learn a lot from something so simple: you can learn about tuned circuits and how to make high Q coils to keep losses low but still reject local stations.

There are web sites with all sorts of simple receiver ideas. I'm sure others will post some pointers for you, or you can just do a web search.

Cheers,
Tom

Daniel Hopkins wrote:
>
> Hello and thanks in advance from a beginner.
>
> I wanted to know how inexpensively one could buy or build a receiver (for
> any frequency), even a single frequency receiver.
>
> I have limited experience with electronics but I do okay.
>
> Thanks again.
>
> Dan Hopkins

3975. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <3921DDC9.C7CDC67A@oio.net>
Source record: 60630
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

WA2FSO,
First, lets find out if your getting the noise through
the power lead, or the antenna. To do this, while the car
is running, and your hearing the noise, disconnect the
antenna. If you still hear the noise, it's comming through
the power lead. If the noise disapears, it's comming in
through the antenna.
While plug wires may make a difference, they aren't the
only source of noise by any means. The same methods of
getting rid of noise always apply; shield, by-pass, and a
five gallon bucket of torriods. '91 usually doesn't have
a fuel pump in the tank, but it can have an electric fuel
pump. If so, by pass it with a capacitor. Try grounding
the motor block to the chassis, body panels to the chassis,
the radio/antenna to the chassis. Everything you can think
of to the chassis. The individual body panels, etc, will
make a small difference, but they are all accumulative. The
'total' can make a big difference.
One note on grounding straps. 'Braid' works fine when
it's first applied. Over a period of time, it will deteriorate
and the 'ground' will suffer. I'm not talking about tarnishing,
I mean that the weather/polutants/etc will make it 'rot'
away. Use a metal strap, such as copper flashing used around
chimneys etc. The bigger the better, within reason.
Good luck.......
'Doc
PS - By-passing the power lead, etc, is never a bad idea.

3976. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: W5LZ <w5lz@oio.net>
Message-ID: <3921E248.4598C949@oio.net>
Source record: 60631
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Daniel,
That depends on what you may have in your 'junk-box'.
It's possible to build a very simple reciever for zero
dollars, and then again, it can cost a lot more than
buying a new one.
If your very close to a broadcast station, a diode
and a set of earphones will/can receive it....
'Doc

3977. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Startiger <grrtigerNOgrSPAM@comteck.com.invalid>
Message-ID: <1ecd9f92.3533d755@usw-ex0102-016.remarq.com>
Source record: 60632
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I have a '91 GMC 1500 truck that probably has the same hardware as your Caprice. I get lots of noise off of the spark plug wires. I've found that replacing the cap, rotor, plugs and all the plug wires including the coil wire about every 50,000 miles helps keep the noise down. It also helps to clean the contacts on the spark plug wires periodically, especially the end that goes in the distributor cap and ignition coil because they get white powdery deposits that will create a spark gap. If your car is like my truck it has a separate ignition coil. Make sure to clean both ends of that coil wire. I found that the dealer had neglected to do so and I got an incredible noise on the radios. That high energy ignition will force a spark through an awful lot of crud to keep the engine running and create a lot of RF noise while doing it.

In article <9Z9U4.8811$gl2.304855@typhoon1.ba-dsg.net>, "WA2FSO" <wa2fso@bellatlantic.net> wrote:
>i have a Alinco DX 70t with the edx-2 auto tuner, I am running this in a
>1991 Chevrolet Caprice v-8. The problem is ignition noise. Its been a
>problem with every radio install. My dads car, also a 1991 Caprice has the
>same problem. Were using resistor plugs. I need suggestions on how to rid
>the car of this noise, have one filter in line, still doesn't solve problem.
>noise is about 5-9 and s9 on am.
>Has anybody else had these issues with the Caprice & or GM Cars? any help or
>advice appreciated.
>
>
>
>

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

3978. Key ON ignition noise 1990 Chev Suburban

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: arronenglish <aenglish15@hotmail.com>
Message-ID: <392205e2_3@127.0.0.1>
Source record: 60633

I have a 1990 Chev Suburban w/ 350 cid gas engine. I have a horrid, relatively high-pitched "raspy" noise evident whenever the ignition switch is in the ON position. No need for the engine to be running. It is entering my mobile rig via antenna connection, not power leads. The noise is most evident on 20 meters, but is not much diminished on any other band -- it is impossible to use the radio as a mobile for *any* non-FM purpose.
I presume the noise is being generated by either the vehicle "computer" (such as it is in a 1990 vehicle) or the electric fuel pump.
There are two bundles of wires connected to the computer module; I put a 1" long ferrite clamp (RadioShack part) on those bundles today and noted no difference in the noise.
I've tried to find the fuse to the fuel pump so that I can disconnect it to see if that stops the noise, but no luck there yet. I do not have access to a service manual to help in finding on which fuse circuit the fuel pump lies (I presume the pump is inside the fuel tank, but that is guarded by a skid plate).
Any suggestions other than 1) sequentially pulling every fuse in the panel whilst listening to the radio, or 2) disconnecting all wires from the computer module?
Thanks in advance,
Aaron

-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----

3979. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <2974is4l52jd6nnlcuqmkuh3glpcs5n932@4ax.com>
Source record: 60634
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Wed, 17 May 2000 02:19:06 GMT, "Bill Kane" <k2ane@home.com> wrote:

>Dear OM
>
>I have read the postings here advising you of what to do. Its all good
>advice. Unfortunately I had a Chevrolet Caprice 1987 with the same problem
>as you and never was able to curb the ignition noise, maybe a couple of db's
>that was it. My 706's blanker made no difference, in fact it was
>overwhelmed.
>
>I did all the things the others have advised and then some with no
>satisfactory results. I even went so far as to buy an ANC-4 noise
>eliminator and put a sense antenna directly into the engine compartment and
>tried to phase the noise out but to no avail. Just a waste of $160.
>
>I even questioned the General Motors engineers who show up at Dayton every
>year in a special booth inside and they did not know what to tell me. Every
>solution they suggested I had performed with negative results.
>
>I tell you this to help you avoid going through a very frustrating
>experience. These GM cars pump out 40kv spikes that no kind of suppression,
>even digital, can cure. Bad design or what, I don't know and no longer
>care. I would set my sites on getting another vehicle down the road and
>assure myself it is inherently quiet. As for me, I mobile as a portable on
>HF. As soon as I start the engine and begin to move I turn the rig off so my
>blood pressure dosen't begin to boil.
>
>The only vehicle I ever had that I could HF mobile in was a diesel. Do
>yourself a favor and give up on the Chevy. Sorry to be negative but that is
>my advice to you.
>
>de Bill K2ANE
>

Have a friend who is using Magnecor CN wires from www.magnecor.com He
said it eliminated ignition noise after all other tries and wires
failed. You might have a look at their site.

Gary

3980. FS: 6080 tubes $1.50 each

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: MURRAY PASTERNACK <M.PASTERNACK@prodigy.net>
Message-ID: <8ft7ku$3rne$1@newssvr03-int.news.prodigy.com>
Source record: 60635
Cross-posted to: rec.antiques.radio+phono,rec.radio.amateur.homebrew

Large quantity of used/untested/pulls type 6080 most marked "Hewlett-Packard made by GE". Also large quantity of NOS tubes. E-mail m.pasternack@prodigy.net for entire list. Murray, W6KRC

3981. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-16 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <sEqU4.93752$VR.1785021@news5.giganews.com>
Source record: 60636
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

The simplest receiver is a diode detector. Originally known as a crystal set. Requires no batteries or transistors or tubes. Only receives AM. See any tutorial on receivers for diagrams; it's so simple it doesn't take much at all.

On the other hand, if you want control over bandwidth, or want to receive other types of modulation, better sensitivity, more audio output, and so on, you have to add cirrcuitry and the cost climbs.

73, Bob K6DDX

3982. Re: Key ON ignition noise 1990 Chev Suburban

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <39189B6C.6B0F@nbnet.nb.ca>
Source record: 60495

Howdy Aaron.....To confirm fuel pump is the culprit, note whether the noise is heard immediately after switching ignition ON (but truck not cranked) for approximately 2 seconds after which time it disappears unless the engine is cranked and runs then - it will show up again. This 2 second run cycle is used for priming the system prior to starting (many people don't know this and merely crank through the time until it starts). Now, having said this, I also remember reading in various packet BBS over the years of some success tracking one source of GM noise down to a device called the DRA (digital ratio adapter) located at the rear of the instrument cluster. This is a configurable device used to make the computer and sometimes the cluster (if electronic) "see" the correction for various driveline final drive ratios. I've checked my files but can't find it right now. Best of Luck.

73 - Gord VE1AJF

3983. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: "Gary P. Fiber" <gfiber@news.cmc.net>
Message-ID: <h245is0qul5vanpf3rdhpoe8m2r5asec6j@4ax.com>
Source record: 60496
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On 17 May 2000 05:53:11 GMT, k3ky@erols.spamnocom (David Sinclair)
wrote:

>The magnecor url given did not work. 73, David K3KY
>
>In article <2974is4l52jd6nnlcuqmkuh3glpcs5n932@4ax.com>
>Gary P. Fiber <gfiber@news.cmc.net> wrote:
>>
>> Have a friend who is using Magnecor CN wires from www.magnecor.com He
>> said it eliminated ignition noise after all other tries and wires
>> failed. You might have a look at their site.
>>
>> Gary
>
>

Yes it works fine for me, just clicked on it in the above message and
was taken right to the Magnecor wires site. It is sp[elled correctly
and the URL is correct.

I noticed I could not access a few sties last night, might have been
net loading.

Gary

3984. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: W4CSC@lostonthe.net
Message-ID: <98B82892546CBE27.70B518E4BABDB121.6759C30AE95262EE@lp.airnews.net>
Source record: 60497
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

On Tue, 16 May 2000 11:06:45 GMT, "WA2FSO" <wa2fso@bellatlantic.net>
wrote:

>i have a Alinco DX 70t with the edx-2 auto tuner, I am running this in a
>1991 Chevrolet Caprice v-8. The problem is ignition noise. Its been a
>problem with every radio install. My dads car, also a 1991 Caprice has the
>same problem. Were using resistor plugs. I need suggestions on how to rid
>the car of this noise, have one filter in line, still doesn't solve problem.
>noise is about 5-9 and s9 on am.
>Has anybody else had these issues with the Caprice & or GM Cars? any help or
>advice appreciated.
>
Find a nice pre-1976 Mercedes diesel for about $1500. Spend a few
thou restoring it. The only electronic noise comes from the cars
driving by you. The "computer" is a lambskin diaphram sensing the
airflow in the venturi at the intake. It never bothers 40
meters....(c;

Mine's a 1973 220D. Finest ham radio car in the world. The HUGE
battery and 85A alternator have no problem pulling the Yaesu FT-900
and souped up TenTec Hercules II running 650W output to a 15' homebrew
monster with 6" Texas Bugcatcher coil and 36" cap hat. Only problem
is the dash lights glow when you use it on 75 meters. Something must
be resonant in the wiring...(c; The MECHANICAL voltage regulator
never gets overrun with RFI at any power level.

It'll stall a Cadillac as it passes you on the interstate....hee hee.

Larry W4CSC....
Don't assume it's not dangerous when noone's aboard. The crossband
packet node is running in the parking lot.....

3985. Re: Collins Mech. Filter - Are they replaceable with X-Tal Filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <4RwU4.81864$so1.997781@news20.bellglobal.com>
Source record: 60498

John C. Ko wrote in message ...
>I have Collins Mechanical filter.
>
>Are they replaceable with existing x-tal filter without any modification if
>its center Freq. is same ? I do not know their characteristics.
>
>My rig is IC-738.
>
>Thanks in advance.
>
>John / N2FNO
>
No, because Collins mech filters are 455-500 khz.

3986. Re: Free XXX stuff

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: WB3KUM/9 <d.breeden@NOSPAMwcom.com>
Message-ID: <39229CB8.4874FF8B@NOSPAMwcom.com>
Source record: 60499
Cross-posted to: rec.radio.amateur.homebrew,alt.radio.amateur.club.taparc

http://resources.hitbox.com/cgi-bin/page.cgi?techsupport/rules

4.You will not create an account for a site with adult content or for a
site that appears to be designed to promote adult sites.

3987. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Alan Price <career1@home.com>
Message-ID: <39229EE9.E789EF76@home.com>
Source record: 60500
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Ken:
I would like to see a picture of one.
Alan
W1HYV

Ken Haydu wrote:

> Hello Dan,
> My hobby is building the one tube SW sets modeled after the 1934 Doerle
> Twinplex. Would be glad to sell one for under $50 shipped. Can email photos
> if you like. Regards,
>
> --
> Ken Haydu

3988. Re: Key ON ignition noise 1990 Chev Suburban

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: jbhall1282@my-deja.com
Message-ID: <8fu9nb$5ho$1@nnrp1.deja.com>
Source record: 60501

Aaron,
I once tracked down a really nasty noise in a car by winding a coil of wire (about 10 turns and 1 to 2 inches in diameter) and connecting it to the end of a coax cable supported by a plastic rod. This device was described in the ARRL Handbook. Connect the coax to your radio then wave the coil around over potentially offensive devices on the car. In my case it turned out to be the fuel injection control module which was in a plastic enclosure. Wrapping it in aluminum foil and connecting the foil to the chassis helped. I made sure to open up all ventillation slots. The noise was still there but it went from 20db over 9 to about S7 on 20 meters. Eventually I pretty much gave up on 20 meters and went to 17. The noise was not present on that band. Good luck
Jerry
W0PWE

Sent via Deja.com http://www.deja.com/
Before you buy.

3989. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Larry Anderson <w6lar@cybertime.net>
Message-ID: <3922B997.E240D927@cybertime.net>
Source record: 60502
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

My experence is with my 87 Suburban. The HEI ignition is a killer and my first rig, a DX70, had virtually no noise blanker whether in the mobil or out. So I traded off and put a 706MKII in my Suburban. Ignition noise still a problem until I got the Magnacore wires. Now that helped a bunch. I did all the grounding, etc and cleaning you could imagine. I run the 706 with a Bandhopper screwdriver antenna and use a Ten Tec amp. So far my HF mobil ops are really fun.

Larry W6LAR

"Gary P. Fiber" wrote:

> On Wed, 17 May 2000 02:19:06 GMT, "Bill Kane" <k2ane@home.com> wrote:
>
> >Dear OM
> >
> >I have read the postings here advising you of what to do. Its all good
> >advice. Unfortunately I had a Chevrolet Caprice 1987 with the same problem
> >as you and never was able to curb the ignition noise, maybe a couple of db's
> >that was it. My 706's blanker made no difference, in fact it was
> >overwhelmed.
> >
> >I did all the things the others have advised and then some with no
> >satisfactory results. I even went so far as to buy an ANC-4 noise
> >eliminator and put a sense antenna directly into the engine compartment and
> >tried to phase the noise out but to no avail. Just a waste of $160.
> >
> >I even questioned the General Motors engineers who show up at Dayton every
> >year in a special booth inside and they did not know what to tell me. Every
> >solution they suggested I had performed with negative results.
> >
> >I tell you this to help you avoid going through a very frustrating
> >experience. These GM cars pump out 40kv spikes that no kind of suppression,
> >even digital, can cure. Bad design or what, I don't know and no longer
> >care. I would set my sites on getting another vehicle down the road and
> >assure myself it is inherently quiet. As for me, I mobile as a portable on
> >HF. As soon as I start the engine and begin to move I turn the rig off so my
> >blood pressure dosen't begin to boil.
> >
> >The only vehicle I ever had that I could HF mobile in was a diesel. Do
> >yourself a favor and give up on the Chevy. Sorry to be negative but that is
> >my advice to you.
> >
> >de Bill K2ANE

> >
> Have a friend who is using Magnecor CN wires from www.magnecor.com He
> said it eliminated ignition noise after all other tries and wires
> failed. You might have a look at their site.
>
> Gary

3990. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <3922C204.40AAD9DC@midwestmicro-tek.com>
Source record: 60503
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Daniel Hopkins wrote:

> Hello and thanks in advance from a beginner.
>
> I wanted to know how inexpensively one could buy or build a receiver (for
> any frequency), even a single frequency receiver.
>
> I have limited experience with electronics but I do okay.
>
> Thanks again.
>
> Dan Hopkins

I started building ham gear last year so I'm kind of where your at experience wise. However I've had some time to look and see what is out there.

I just built the Ten-Tec 1253 9 band receiver last month. It cost $59.00 (+ s.h.). Its a regeny but it works pretty well. The selectivity leaves something to be desired but..... I built it to use while I got my tube based superhet built.

The gear I build uses tubes for two reasons. One, I got a lot of them that I collected as a kid that were still in a box in my folk's basement (after 25 years). And because they're so damn neat.

If your on a limited budget like I am, tubes can be the way to go. The superhet that I'm building is costing me only a few dollars, mostly for the transformers. I got most of the parts that I needed from some old junk tube radios that I got for a buck from a second hand shop.

If your looking for something fairly easy to build without a lot of cost, look into the kits offered by Ten Tec, Ramsey, and others. Kits are a good mix of cost, perfomance, and simple construction trade offs.

If your interest, e-mail me and I'll point you in some directions to start (may not be the right direction but still..). Good luck

Rick KC0GIX

3991. Re: FT-2600 Problem Please Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Barry <x123x123@yahoo.com>
Message-ID: <HsAU4.56988$55.1202588@news2.rdc1.on.home.com>
Source record: 60504
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I gather you mean the "HOME" channel. It's on page 34 of my manual.

Barry
VA3BJD

Bill and Tracy <tmbc@nf.sympatico.ca> wrote in message
news:NRlU4.75871$r37.946138@news20.bellglobal.com...
> I just bought a new FT-2600M and was wondering how to change and or
disable
> the priority channel. It is stuck on 145.000MHz and I have looked trough
> the manual and can't seem to find out how to change it. Thanks in
advance.
>
> Bill
> VO1BIL
>
>

3992. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <3922DF80.F04C026@agilent.com>
Source record: 60505
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Bob wrote:
>
> The simplest receiver is a diode detector. Originally known as a crystal
> set. Requires no batteries or transistors or tubes. Only receives AM.

Oh, a challenge! I'll bet I can receive FM on one... Of course, I DO need to add some tuned circuits, or at least one tuned circuit. But for sure there's no reason I couldn't build a ratio detector with just diodes and tuned circuits, tuned directly to an FM station. And slope detection is even simpler. Stereo might be a bit tough, though. ;-)

Cheers,
Tom

3993. Search engine for ssb+demodulation

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: jos <soj@sympatico.ca>
Message-ID: <3922F477.1F12D927@sympatico.ca>
Source record: 60506

Hello! I was looking for information on SSB+demodulation and I tried
http://www.google.com Imagine, I got 532 headings! VE2AUC

3994. Re: How cheaply can I build/buy it? Attn TOm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: General Mark Morgan <one.big.asshole@ahole.com>
Message-ID: <392316A6.1D86502C@ahole.com>
Source record: 60507
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

You're such a dork.....

Tom Bruhns wrote:
>
> Bob wrote:
> >
> > The simplest receiver is a diode detector. Originally known as a crystal
> > set. Requires no batteries or transistors or tubes. Only receives AM.
>
> Oh, a challenge! I'll bet I can receive FM on one... Of course, I DO
> need to add some tuned circuits, or at least one tuned circuit. But
> for sure there's no reason I couldn't build a ratio detector with just
> diodes and tuned circuits, tuned directly to an FM station. And slope
> detection is even simpler. Stereo might be a bit tough, though. ;-)
>
> Cheers,
> Tom

3995. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8fsqhgctt1@neptunium.btinternet.com>
Source record: 60508
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Best to begin with the most simple and inexpensive arrangement
possible.

The most simple receiver is for the medium-wave AM band. All you need
is a coil wound on a toilet roll tube, a 350 pF variable capacitor, a
germanium diode and 150 feet of 20 gauge magnet wire. Half the wire
will be on the tuning coil and the other half ouside in your back
yard. Use your domestic metal cold water pipes as a ground
connection.

Because a pair of sensitive high impedance, 4000 ohms, headphones are
very expensive even if you knew where to get any (you cannot have
mine) you will need a single-chip, 200 mW, audio power amplifier and a
small, 2" 8 or 16 ohm loud speaker. Or a hearing aid insert.

Put a small soldering iron and reel of cored solder on your shopping
list.

When that job's done you will be well on the way to becoming a fully
fledged radio amateur.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
Daniel Hopkins <dhopkins@echezabal.com> wrote in message
news:#N16vW3v$GA.240@cpmsnbbsa04...
> Hello and thanks in advance from a beginner.
>
> I wanted to know how inexpensively one could buy or build a receiver
(for
> any frequency), even a single frequency receiver.
>
> I have limited experience with electronics but I do okay.
>
> Thanks again.
>
> Dan Hopkins
>
>

3996. Re: 50 ohm to 5k ohm audio transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3921d81c.183356220@news.online.no>
Source record: 60509

On Mon, 15 May 2000 18:14:45 -0700, Tom Bruhns
<tom_bruhns@agilent.com> wrote:

>I'd sure agree that a transformer makes a lot of sense if you're going
>to use something as noisy as a 741 (or the unspecified Radio Shack
>amplifier). FWIW, Mouser (www.mouser.com) have a good selection of
>inexpensive audio transformers. There's a 4.6k (ct) to 20 (ct) that
>should work well, for only $1.73. I admit to a personal preference to
>go the amplifier route with no transformers, but with parts with
>seriously low voltage noise, which a 741 will simply never do.
>
>Cheers,
>Tom
>
>
perhaps it is an idea to use the available transformer whatever it is,
and change the circuit to suit this? If a 100 to 1000 ohm transformer
is available it may probably work as 50 to 500 ohm for a limited
frequency range

73
jan-martin
LA8AK

3997. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <BfFU4.25910$sB3.8875@news.indigo.ie>
Source record: 60510
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Have a look at my very simple, single transistor, regenerative RX.
It's only a single transistor RX, if you don't count the several
million transistors in my computer:-) I use my PC sound card as
the audio amp.

http://www.qsl.net/regen.html

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

3998. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Bill Turner W7TI <w7ti@jps.net>
Message-ID: <WTGU4.611$0R.107968@nntp3.onemain.com>
Source record: 60511
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

If you take Bill Kane's advice and give up on the Chevy, consider a Ford
with the 460 engine. I have a '96 F-250 pickup that I can operate HF mobile
in WITHOUT THE NOISE BLANKER. It really is that quiet, believe it or not.
I have been HF mobiling for almost 40 years in all kind of vehicles and have
never seen anything as quiet. YMMV, of course, so take a shortwave receiver
with you when you go car shopping and try to ignore the puzzled looks from
the salesman.

W7TI

Bill Kane <k2ane@home.com> wrote in message
news:uknU4.194363$bm.1069208@news1.alsv1.occa.home.com...
<snip>

> The only vehicle I ever had that I could HF mobile in was a diesel. Do
> yourself a favor and give up on the Chevy. Sorry to be negative but that
is
> my advice to you.
>
> de Bill K2ANE
>
>

3999. Re: SSB DETECTION! (Automatic)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Joe Leikhim <jleikhim@nettally.com>
Message-ID: <39235F3B.D2FD0A42@nettally.com>
Source record: 60512

As I promised;

See Jan 1999 QEX page 9, Title: Tune SSB Automatically Author: Dick, Robert
.

Also Mar 1999 QEX Page 61 Title: Tune SSB Automatically (Letters to the Editor)
Author Premena, S., AJ0J

Now I would hope someone smarter than I would write code to flash this into the
Timewave 599zx.

--
Joe Leikhim K4SAT
Jleikhim@nettally.com

"tv dinner by the pool,
i'm so glad i finished school" -F.Zappa 1967

"The Revolution will NOT be televised" -Gil Scott Heron

Dopeler effect: The tendency of stupid ideas to seem smarter when they come
at you rapidly.

4000. Re: Ideas for a Homebrew Shortwave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8g16iinjs1@slb7.atl.mindspring.net>
Source record: 60513

In article <8fnf5amne1@newsg4.svr.pol.co.uk>,
&#65533; <john@clavin.freeserve.co.uk> wrote:
>
>Im designing a SW receiver. The specs are... 5.95 mhz to 14.30 Mhz
>receive. Single conversion, 455 khz.
>
>with... RF Pre-selector AND tuned RF amplifier to minimise 2nd order
>receive products. Switched 6dB attenuator for 3rd order product elimination.
>Diode ring mixer(low noise) followed by two tuned IF amp's sandwiching a
>murata CFG455H high performance 6khz I.F filter. Diode detector for AM and
>insertion osc/product detector for cw/ssb. SCAF audio filter and 3-4 watt
>audio output.
>
>Anyone got any ideas to improve on things? For example, to minimise
>intermodulation products the VFO and insertion osc should be pure. Anyone
>got tips on how to design and build a spectrally "pure" oscillator? Also
>Which units should be individually screened when i begin to build?.. I'm
>thinking screened RF stage and screened VFO's. Any comments welcome....

Surfing around a couple months ago, I found a selection of monolithic
cystal filters on the Fox web site. Stock values were at 10.7, 16.9 and
21.4 MHZ. Anyone played with these?

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

4001. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: NA4G Boatanchor Bob <na4g@weedcon2.cropsci.ncsu.edu>
Message-ID: <8furr8$9n0$1@uni00nw.unity.ncsu.edu>
Source record: 60514
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

In rec.radio.amateur.homebrew Daniel Hopkins <dhopkins@echezabal.com> wrote:
> Hello and thanks in advance from a beginner.

> I wanted to know how inexpensively one could buy or build a receiver (for
> any frequency), even a single frequency receiver.

> I have limited experience with electronics but I do okay.

> Thanks again.

> Dan Hopkins

Well, for the fun of it I built a small 80M CW receiver, transmitter, and telegraph key for about 10 bucks in the hardware store plus some minor parts scrounging. It is crude, but it works. One can do a lot if one scrounges and thinks a little about it, and is good at adapting the flotsam and jetsam of the electronics world to make the critter.

http://www.mindspring.com/~johnmb/na4g2.htm

Not necessarily recommended for contesting, but great for a little fun on 80M, in the evenings.

Good Luck, and have fun building.... that is a lot of the fun of Amateur Radio.....

Bob/NA4G

4002. CPRC-26 help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Francesco Tamburro <ik8pae@uniserv.uniplan.it>
Message-ID: <3921e66b.0@nt01.uniplan.it>
Source record: 60637

Does anyone knows where i can find on line CPRC-26
schematics???
Thanks in advance .vy '73 es gl de
IK8PAE Francesco

4003. FT-2600 Problem Please Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <NRIU4.75871$r37.946138@news20.bellglobal.com>
Source record: 60638
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I just bought a new FT-2600M and was wondering how to change and or disable the priority channel. It is stuck on 145.000MHz and I have looked trough the manual and can't seem to find out how to change it. Thanks in advance.

Bill
VO1BIL

4004. Collins Mech. Filter - Are they replaceable with X-Tal Filter ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: "John C. Ko" <n2fno@att.net>
Message-ID: <f%IU4.69829$WF.3886110@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60639

I have Collins Mechanical filter.

Are they replaceable with existing x-tal filter without any modification if its center Freq. is same ? I do not know their characteristics.

My rig is IC-738.

Thanks in advance.

John / N2FNO

4005. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Ken Haydu <darla@bcinet.net>
Message-ID: <8fsqahinp0@208.133.29.52>
Source record: 60640
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Hello Dan,
My hobby is building the one tube SW sets modeled after the 1934 Doerle Twinplex. Would be glad to sell one for under $50 shipped. Can email photos if you like. Regards,

--
Ken Haydu

4006. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: sbd7777@aol.com
Message-ID: <20000516221008.09307.00002908@ng-fq1.aol.com>
Source record: 60641

I have a 97 GMC Suburban, and have reduced the ignition noise somewhat. Here's what I did: bonding of all metal parts that i thought were not adequately "connected" to the frame, MAGNECOR 8mm wires, new plugs, rotor, and cap. Also found a tech service bulletin at the "ALLDATA" site that addressed noise in mobile radios.The dealer can reprogram the engine control computer in my GMC to reduce ignition noise. It worked.
Good Luck
Mike
AD1OS

4007. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: Bill Kane <k2ane@home.com>
Message-ID: <uknU4.194363$bm.1069208@news1.alsv1.occa.home.com>
Source record: 60642
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

Dear OM

I have read the postings here advising you of what to do. Its all good advice. Unfortunately I had a Chevrolet Caprice 1987 with the same problem as you and never was able to curb the ignition noise, maybe a couple of db's that was it. My 706's blanker made no difference, in fact it was overwhelmed.

I did all the things the others have advised and then some with no satisfactory results. I even went so far as to buy an ANC-4 noise eliminator and put a sense antenna directly into the engine compartment and tried to phase the noise out but to no avail. Just a waste of $160.

I even questioned the General Motors engineers who show up at Dayton every year in a special booth inside and they did not know what to tell me. Every solution they suggested I had performed with negative results.

I tell you this to help you avoid going through a very frustrating experience. These GM cars pump out 40kv spikes that no kind of suppression, even digital, can cure. Bad design or what, I don't know and no longer care. I would set my sites on getting another vehicle down the road and assure myself it is inherently quiet. As for me, I mobile as a portable on HF. As soon as I start the engine and begin to move I turn the rig off so my blood pressure dosen't begin to boil.

The only vehicle I ever had that I could HF mobile in was a diesel. Do yourself a favor and give up on the Chevy. Sorry to be negative but that is my advice to you.

de Bill K2ANE

4008. Baggybob surface mount parts at Dayton

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: baggybob@execpc.com
Message-ID: <3922078f$0$63041@news.execpc.com>
Source record: 60643

We will be at DAYTON parking spots 4055 & 4056 with the usual assortment
of parts: chip resistors, chip caps, mica chip caps, chip inductors,
tantalums, transistors and leaded parts including mica caps.
Special assortment of chip resistors (50 different values)
2/$15

thank ypu

4009. Re: Help Ignition Noise 1991 Caprice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-17 00:00:00 UTC
From: k3ky@erols.spamnocom
Message-ID: <8ftc47$7jd$1@bob.news.rcn.net>
Source record: 60644
Cross-posted to:
rec.radio.amateur,rec.radio.amateur.antenna,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

The magnecor url given did not work. 73, David K3KY

In article <2974is4l52jd6nnlcuqmkuh3glpcs5n932@4ax.com>
Gary P. Fiber <gfiber@news.cmc.net> wrote:

> On Wed, 17 May 2000 02:19:06 GMT, "Bill Kane" <k2ane@home.com> wrote:
>
>>Dear OM
>>
>>I have read the postings here advising you of what to do. Its all good
>>advice. Unfortunately I had a Chevrolet Caprice 1987 with the same problem
>>as you and never was able to curb the ignition noise, maybe a couple of db's
>>that was it. My 706's blanker made no difference, in fact it was
>>overwhelmed.
>>
>>I did all the things the others have advised and then some with no
>>satisfactory results. I even went so far as to buy an ANC-4 noise
>>eliminator and put a sense antenna directly into the engine compartment and
>>tried to phase the noise out but to no avail. Just a waste of $160.
>>
>>I even questioned the General Motors engineers who show up at Dayton every
>>year in a special booth inside and they did not know what to tell me. Every
>>solution they suggested I had performed with negative results.
>>
>>I tell you this to help you avoid going through a very frustrating
>>experience. These GM cars pump out 40kv spikes that no kind of suppression,
>>even digital, can cure. Bad design or what, I don't know and no longer
>>care. I would set my sites on getting another vehicle down the road and
>>assure myself it is inherently quiet. As for me, I mobile as a portable on
>>HF. As soon as I start the engine and begin to move I turn the rig off so my
>>blood pressure dosen't begin to boil.
>>
>>The only vehicle I ever had that I could HF mobile in was a diesel. Do
>>yourself a favor and give up on the Chevy. Sorry to be negative but that is
>>my advice to you.
>>
>>de Bill K2ANE
>>
> Have a friend who is using Magnecor CN wires from www.magnecor.com He
> said it eliminated ignition noise after all other tries and wires
> failed. You might have a look at their site.
>
> Gary

4010. WTB small Air Variable Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: Ken Haydu <darla@bcinet.net>
Message-ID: <8g15ok$h1p$0@208.133.29.183>
Source record: 60515

Looking for small air variable caps. Used will be fine. Must accept standard
1/4" knobs. Cannot use screwdriver adjustable trimmers. Threaded mounting
nut type a plus, but screw mounted type considered.
Any size from 150 pfd down to 10 pfd wanted.

--
Ken Haydu

4011. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <392432CD.EF015BF@clifto.com>
Source record: 60516
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Eamon Skelton wrote:
> Have a look at my very simple, single transistor, regenerative RX.
> It's only a single transistor RX, if you don't count the several
> million transistors in my computer:-) I use my PC sound card as
> the audio amp.
>
> http://www.qsl.net/regen.html

Or maybe <http://www.qsl.net/ei9gq/regen.html>. :-)

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4012. Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <MHVU4.13858$OP1.109235@typhoon.ne.mediaone.net>
Source record: 60517

Ok,
For once the TV is interfering with my DX work, rather the the ham radio interfering with the TV.
When working DX on 20m or below, when ever the TV is on, it acts as a signal generator every 15khz(always on to of the rare DX) through the HF bands. If anyone knows out how to eliminate or reduce the interference please e-mail me at:
aa1uz@arrl.net.

Thanks and 73,
Drew Leavitt,
AA1UZ

4013. DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: Reg <reg@nospamlakeside0.free-online.co.uk>
Message-ID: <GhYU4.388$J5.21354@stones>
Source record: 60518

Hi list,
has anybody got any good ideas for home made insulators
for longwires and dipoles etc.

just a thought :)

73

Reg

4014. Re: Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <mJYU4.86413$so1.1116565@news20.bellglobal.com>
Source record: 60519

robert leavitt wrote in message ...
>Ok,
>For once the TV is interfering with my DX work, rather the the ham radio
>interfering with the TV.
>When working DX on 20m or below, when ever the TV is on, it acts as a
signal
>generator every 15khz(always on to of the rare DX) through the HF bands.
If
>anyone knows out how to eliminate or reduce the interference please e-mail
>me at:
>aa1uz@arrl.net.
>
>Thanks and 73,
>Drew Leavitt,
>AA1UZ
>
All TV sets have a 15 kHz transmitter built in. It's called the horizontal output stage. Even worse, tv's have almost no shielding, and are in plastic cabinets so the signal is free to radiate. You can try to reduce the interference by using a power line RFI filter at the ham rig and also at the TV set. There have been construction articles of these in ham handbooks and magazines. Relocating the TV set may not be practical, but that can help also.

4015. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: lyman@naval.com
Message-ID: <4HYU4.6494$CS3.39434@typhoon.tampabay.rr.com>
Source record: 60520
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

In article <KT_v4.4223$vd7.126791@bgtnsc04-news.ops.worldnet.att.net>, "Al, N2NKB"
<n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:
>
>J M Noeding wrote in message <38c04932.85409650@news.online.no>...
>>On Fri, 03 Mar 2000 17:41:53 GMT, Ash <ash@vvv.tf> wrote:
>>
>>>Hi,
>>>living quarter of a mile away from a powerful pager-system transmitter
>>>makes
>>>dx-ing rather difficult, interference spread over a BIG spectrum and I
>>>need to
>>>make some filters for 169.5-170MHz to put in front of the pre-amps,
>>>anyone have any good designs/schematics for easy-to-build filters?
>>>
>>>//Ash
>>>
>>single quarterwave with RG213 may attenuate 30dB, twin filter possibly
>>60dB, but need some impedance correction on 144MHz to minimise losses
>>if you choose twin filter
>>
>>73 jan-martin
>>LA8AK
>
>I think that jan-martin is recommending a stub, but I'm not sure. If you take
> a 1/4 wavelength long
>piece of coax, and keep one end open circuit, the other end will appear to be a
> short circuit.
>So you can simply "Tee" the stub into your antenna transmission line. However,
> the Q might be low enough to
>degrade the wanted signal that is 26 MHz lower.
>Al
>
>

Dale at Par Electronics can help you. par@parelectronics.com
He makes filters just for that reason.
http://www.rf-filters.com/filters.html

73,

4016. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: Martin Meserve <meserve@my-deja.com>
Message-ID: <39245AC1.167EB0E7@my-deja.com>
Source record: 60521

Reg wrote:
>
> Hi list,
> has anybody got any good ideas for home made insulators
> for longwires and dipoles etc.
>
> just a thought :)
>
> 73
>
> Reg

My favorite is PVC pipe. You can easily cut it lengthwise
and create nice strong end insulators. I also use them
for spreaders on home made open wire line.

Take a look at the following article. The author makes
good use of PVC spreaders and insulators.

http://www.natworld.com/ars/pages/back_issues/0698_text/ffd.html

Martin

--
Martin E. Meserve KB7EQS martin.e.meserve
Engineer, Program/Project Specialist AT
Lockheed Martin M&DS - Reconnaissance Systems lmco.com

I respond to news groups and E-Mail on my own time and therefore my
responses may not be as timely as you, or I, would like them to be. If
I seem to be ignoring you, send me another E-Mail to jog my memory.
Opinions are my own and do not reflect the opinions of my employer.

----------== Posted via Deja News, The Discussion Network ==----------
http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

4017. Re: How cheaply can I build/buy it?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <O9_U4.26196$sB3.8869@news.indigo.ie>
Source record: 60522
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

>> http://www.qsl.net/regen.html
>
>Or maybe <http://www.qsl.net/ei9gq/regen.html>. :-)

Oops! Sorry about that. Thanks Cliff.

Ed.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

4018. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-18 00:00:00 UTC
From: choronzon@gmx.de
Message-ID: <39246dc1.4264952@news.comundo.de>
Source record: 60523
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I�m no HF expert, but I recently noticed that standard AM IF
transformer cans have one hell of a selection if used "backwards"
(tapped side as output, but not using tap) and driven from a high
impedance source (10-500K resistor) combined with a high impedance on
the output
(I used 33pf coupling to next transistor).

On Sun, 30 Apr 2000 06:27:21 GMT, blackm00@cam.org (Michael Black)
wrote:

>In article <390BC27F.EEE83B73@webaxs.net>, "Russ.Shaw"
><russell@webaxs.net> wrote:
>
>> Hi all,
>>
>> I'll make an 80m SSB transceiver, and possibly make it a kit,
>> after i get a source of parts that don't cost too much.
>>
>> Is there a source of 2-3kHz BW 455kHz SSB filters that doesn't
>> cost a lot?
>>
>> Apart from Amidon, are there any other sources of readily
>> available toroids/IF-transformers?
>>
>> I'm aiming for 1-10W output, 455kHz single conversion, and
>> battery-portable.
>>
>It strikes me that if there were suitable inexpensive 455KHz filters,
>we would have heard about them long ago.
>
>At 455KHz, most construction articles used either Collins mechanical
>filters, which of course tend to be expensive, or home made crystal
>lattice filters made with surplus crystals, preferably in FT-243
>cases so they could be ground to the needed frequency.
>
>The obvious "cheap" filter would be a ceramic filter. But in reading
>ham magazines from the past forty years, I've only seen very vague
>references about using them for transmitting purposes. The articles
>that come to mind were more idea articles, to hint at something or
>to point to such a filter and suggest some uses for them. But
>hard information wasn't included so it's hard to tell whether there
>was merit behind the suggestion, and nobody went and took the idea
>further into a construction article. The filters discussed may
>not have been really great for transmitting purposes, or perhaps

>the only reason they were considered "inexpensive" was in comparison
>with Collins mechanical filters.
>
>Of course, some of the Japanese rigs seem to use ceramic filters at
>455KHz for transmitting, but I've never seen prices for the filters
>alone, so they may not be inexpensive.
>
>Even commonly available ceramic filters, such as the type you find
>in a lot of AM broadcast radios, don't seem to have been given much
>experimental treatment. Those would probably be too wide, but I wonder
>if you could get a sharp enough skirt for SSB if you cascaded some
>filters. You can get narrower ceramic filters, I've seen them in
>CB sets and maybe http://www.digikey.com carries them along with
>wider ceramic filters. Again, the question is whether cascading
>will give you a decent filter overall.
>
>I've not seen the actual article, but I have seen mention of an
>piece about cascading ceramic filters. From a previous post of
>mine:
>
>"In an old article in 73 (December 1977) about the Yaesu
>FRG-7, reference is made to an "by Ron Risher VK3OM in the March 1977
>issue of "Amateur Radio". He describes... an alternate filter, consisting
>of four cascaded SFD-455-B solid state filters linked by small coupling
>capacitors". It might be interesting to someone who can get ahold of the
>magazine, which I assume is Australian."
>
>It sounds like an idea to look into, though I have no idea of the
>specs of that filter.
>
>Some people have speculated, and done some testing, in
>rec.radio.amateur.homebrew about using 455KHz ceramic resonators,
>which are cheap and fairly readily available, in ladder filters.
>Doing a search at http://www.dejanews.com will turn up some old
>posts about the idea.
>
>Of course, once we are talking about ladder filters, one could
>abondon the 455KHz IF. A lot of work has been done on ladder filters
>in homebrew equipment, and the interest has arisen because the crystals
>are cheap, and you only need them on one frequency (unlike lattice
>filters), and surely because inexpensive commerically made filters
>are non-existent. A lot can be said for putting the IF somewhere
>in the HF range. The crystals may be even easier fo find than
>a ceramic resonator at 455KHz, and you won't have to worry about
>image rejection.
>
>QST has published a number of articles about ladder filter design,
>and they've been reprinted in various ARRL books. And I've seen
>some information about them in RSGB publications.
>

> Michael VE2BVW

4019. Re: basic ?? about rcvr front-end filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <3925C7E4.357319B5@dialpoint.net>
Source record: 60445

The shielding is usually done so there is inductive coupling only and no capacitive coupling. Sometimes makes it easier to ensure the coupling is only by the desired method and ammount.

To get the selectivity needed you can over couple the coils, or you can stagger tune them. There are 3 types of coupling--under, critical, over. Under coupling will not transfer the maximum power, critical will pass the maximum power and not make the passband much wider, over coupling will make the passband broader.

> At the output of the rf amp, there is a "bandpass filter" to couple the
> rf to the next stage (the mixer). This bandpass filter consists of two
> slug-tuned inductors, which are to be adjusted so they resonate at the
> desired frequency band.
>
> Question: in reviewing some construction projects in the handbooks, I
> see that often, the two inductors of the bandpass circuit are separated
> by a metal plate or shield. Why is this? Does the coupling need to be
> restricted to such a very low amount? In one particular circuit, the
>
> Why the shielding (chassis or metal plate) between the inductors? Or in
> other words, what extent of coupling between the rf amp and mixer is
> sought? (Evidently not much...?)
>
> On a similar note, how is a fairly broad band-pass achieved, so that the
> signals over an entire ham band will be passed without undesired
> attenuation? Does this have to do with loose coupling afforded by the
> shielding between the bandpass coils?

4020. Re: Live voice & text chat for hams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Louis Bybee <louisb@datacomm.com>
Message-ID: <3925E057.1460DA90@datacomm.com>
Source record: 60446
Cross-posted to: nl.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,tw.bbs.rec.radio.amateur

I have a Ham friend that can do it without even turning on his radio.
:-]

Louis

Bill Cromwell wrote:
>
> I do that on 40.

4021. Home brew Doppler DF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Bill Kenworthy <billken@hevanet.com>
Message-ID: <3925dc68@news-out.newsnerds.com>
Source record: 60447

Anyone have experience with Doppler DF and if accuracy is improved by increasing the number of antenna's to 8?

Bill KB7DFE

4022. Re: Home brew Doppler DF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Jack Taylor <n7oo@theriver.com>
Message-ID: <kGmV4.102064$MB.2019608@news6.giganews.com>
Source record: 60448

Back in the mid 60's I maintained a VHF/UHF doppler DF unit for the FAA in Bakersfield. This unit had 16 antennas and as I recall the bearing accuracy was around 2-3 degrees. So the answer to your question is 'yes'. However of course, the circuit has to be designed to accomodate the number of antennas used.

73 de Jack

Bill Kenworthy wrote in message <3925dc68@news-out.newsnerds.com>...
>Anyone have experience with Doppler DF and if accuracy is improved by
>increasing the number of antenna's to 8?
>
>Bill KB7DFE
>
>

4023. + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Grace Cunningham <johngrac@surfsouth.com>
Message-ID: <39260896.79D8@surfsouth.com>
Source record: 60449

Now that it's summer, it stands to reason, the best way to keep your radio cooler, from the hot sun, is to paint that sucker WHITE! Become a trend setter. No one I know has a WHITE rig! Go for it! I'm going to put clear finish on mine (after painting) to give it that fresh wax shine!
Good Luck, KE4QOP John
P.S. Yellow not a bad!

4024. Re: What is a Nuvistor

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Carlos <ktunksNOktSPAM@earthlink.net.invalid>
Message-ID: <137bded0.b9835921@usw-ex0103-024.remarq.com>
Source record: 60450

In article <8fffl r$j5h$1@news.kersur.net>, "Geoffrey G. Rochat"
<geoff@pkworks.com> wrote:
>My audiophile friends tell me they also sat in the front-end of
>studio-quality ribbon microphones.
>
>Nick wrote in message
<1mflhs8micnop2g4mlfiedpq7b383ri4tv@4ax.com>...
>>On 10 May 00 15:25:39 GMT, jhoyos@hoth.gcn.ou.EDU wrote:
>>I think you must be refering to condenser microphones.Ribbon
mikes do not have any active components.
>>>
>>>
>>>Do the Nuvistor tubes have special characteristics?
>>
>>I think they were popular in video cameras as well
>>
>>Nick
>
>
>
>

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

4025. Cell Phone Conversion

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: George Andrews <mauser2@erols.com>
Message-ID: <8g5jod$ek4$1@bob.news.rcn.net>
Source record: 60451

To All,
Has anyone converted a portable cell phone to the 900 MHz amateur band? Is this in fact possible? My thanks in advance to all who respond.

--
George Andrews, RRPT
mauser2@erols.com
N1YAE FN31kj

4026. Live voice & text chat for hams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: MITBR <mitbr@earthlink.net>
Message-ID: <Vx%U4.2631$S31.44623@newsread2.prod.itd.earthlink.net>
Source record: 60524
Cross-posted to: nl.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,tw.bbs.rec.radio.amateur

Hello folks!!
Just wanted to let everyone know that there has been major improvements to
the world wide voice & Text chat system for hams!! There is now the
provision for private chat rooms. The idea is that you wait for someone to
arrive in the main chat then go to a private chat with them if you wish. The
audio in the system rivals that of anything currently available and also
supports a text chat on the same screen. Use the system to set up skeds,
check the muf on a freq, meet new hams, have meetings or just plain ragchew.
Go to the url here to directly enter the chat
http://home.earthlink.net/~mitbr/AmateurRadioChat.htm
If no ones there when you arrive simply hang around for awhile while you
surf the net some one will come along!! Spread the word folks .
Tim Breckon-- --
Please visit my web site url below
Tampa Bay Radio Page
http://home.earthlink.net/~mitbr/Mi01000.htm

4027. Re: Cheap 455kHz SSB filters?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: "Russ.Shaw" <russell@webaxs.net>
Message-ID: <3924A2A5.77680F75@webaxs.net>
Source record: 60525
Cross-posted to: rec.radio.amateur.homebrew,sci.electronics.components

I did measurements on a set of these 455kHz cans: red, white, and
black ones. The red is the autodyne converter, white is for intermediate
IF stages, and black drives the envelope detector. The white and black
ones had an unloaded Q= 30.

Andrew Steven Dixon wrote:
>
> Iï¿½m no HF expert, but I recently noticed that standard AM IF
> transformer cans have one hell of a selection if used "backwards"
> (tapped side as output, but not using tap) and driven from a high
> impedance source (10-500K resistor) combined with a high impedance on
> the output
> (I used 33pf coupling to next transistor).
>
--
****
* Russell Shaw, B.Eng, M.Eng(Research) *
* Electronics Consultant *
* email: russell@webaxs.net *
* Australia *
****

4028. Re: FT-2600 Problem Please Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <E12V4.91237$so1.1156347@news20.bellglobal.com>
Source record: 60526
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

No I want to change channel 1 from 145.000MHz to another frequency. I know how to delete channels but I can not delete or change channel 1. There is a note on page 35 of the manual that states "Note that memory channel 1 may not be deleted, as it is the priority channel." I can't seem to figure it out.

Bill

"Barry" <x123x123@yahoo.com> wrote in message
news:HsAU4.56988$55.1202588@news2.rdc1.on.home.com...
> I gather you mean the "HOME" channel. It's on page 34 of my manual.
>
> Barry
> VA3BJD
>
> Bill and Tracy <tmbc@nf.sympatico.ca> wrote in message
> news:NRlU4.75871$r37.946138@news20.bellglobal.com...
> > I just bought a new FT-2600M and was wondering how to change and or
> disable
> > the priority channel. It is stuck on 145.000MHz and I have looked
trough
> > the manual and can't seem to find out how to change it. Thanks in
> advance.
> >
> > Bill
> > VO1BIL
> >
> >
>
>

4029. FS: Books and Magazines

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: azkb7ryu@aztec.asu.edu
Message-ID: <8g2brm$nc6$1@news.asu.edu>
Source record: 60527

Hello,

I have the following items for sale. Please note, the prices do not include shipping.

73, Joel KB7RYU (Phoenix, Arizona)

World Radio Laboratories Map dated 1960 - Like new condition $5.00

Radio Handbook Fourteenth Edition 1956 - Good condition $15.00

Radio Handbook Twelfth Edition 1949 - Like New $20.00

Radio Handbook Tenth Edition 1946 - Has a "" tear along top right side of spine, otherwise good condition. $20.00

Radio Circuit Hints - Volume One Compiled and Published by Sylvania Electric Products Inc. 1943 First Edition Fourth Printing Excellent condition $5.00

Radio Tube Hints - Volume One Compiled and Published by Sylvania Electric Products Inc. 1943 First Edition Fourth Printing Excellent condition $5.00

Radio Equipment Hints - Volume One Compiled and Published by Sylvania Electric Products Inc. 1943 First Edition Fourth Printing Excellent condition $5.00

Radio and Television News June 1955 Good condition with exception of slight tear at bottom of spine. $1.00

Popular Electronics June 1958 Slightly yellowed and has a callsign written on cover - otherwise looks good. $0.50

I tried to describe and price the following QSTs as accurately as possible. If anyone has a question as to a specific issue etc., please email me (azkb7ryu@aztec.asu.edu).

July 1948 Fair to good $1.00
Sept 1948 Fair to good $1.00
Nov 1948 Fair - Edge of cover is a bit worn but not bad. $1.00

Dec 1952 Fair $1.00

Aug 1953 Poor - Cover yellowed and partially detached. $0.25

Oct 1954 Good $1.00

1955 Excellent to like new condition. $1.00 Each
Jan 1955
Feb 1955
March 1955
April 1955
May 1955
June 1955

July 1955
Aug 1955
Sept 1955
Oct 1955
Nov 1955
Dec 1955

1956 Excellent to like new condition. $1.00 Each
Jan 1956
Feb 1956
March 1956
April 1956
May 1956
June 1956
July 1956
Aug 1956
Sept 1956
Oct 1956
Nov 1956
Dec 1956

1957 Fair to good condition. $1.00 Each
Jan 1957
March 1957
April 1957
June 1957
July 1957
Aug 1957
Sept 1957
Oct 1957 (QTY 2)

1958 Fair to excellent $1.00 Each
Jan 1958
Feb 1958
March 1958
April 1958
May 1958
June 1958
July 1958
Aug 1958
Sept 1958
Oct 1958
Dec 1958

1959 - Fair to very good condition. $1.00 Each (Unless otherwise noted)
Jan 1959
Feb 1959
March 1959 (QTY 2)
April 1959 - Tear along bottom of spine, otherwise very good condition.
May 1959
June 1959

July 1959
Aug 1959
Sept 1959 Poor - Waterdamaged. $0.25
Oct 1959
Nov 1959
Dec 1959

1960 Fair to very good condition. $.50 Each
Jan 1960
Feb 1960
March 1960
May 1960
June 1960
July 1960
Oct 1960
Nov 1960

1961 Fair to very good condition $0.50
March 1961
April 1961
May 1961
Aug 1961
Sept 1961
Nov 1961

1964 Good condition. $0.50
Jan 1964
Feb 1964
April 1964
June 1964
Aug 1964

March 1965 Good condition $0.25

73 Amateur Radio Most are in good condition
1964 - $0.25 Each
Jan 1964
Feb 1964
March 1964
May 1964
June 1964
July 1964
Sept 1964

1965 - $0.25
Jan 1965
Feb 1965
March 1965
Oct 1965
Dec 1965

1966 - 0.25
Jan 1966
Feb 1966
March 1966
April 1966
May 1966
Sept 1966
Oct 1966
Nov 1966
Dec 1966

1967 - $0.25
Jan 1967
March 1967
April 1967
May 1967
June 1967
Aug 1967
Sept 1967
Oct 1967
Nov 1967
Dec 1967

1968 - $0.25
Jan 1968
Feb 1968
March 1968
April 1968
May 1968
Aug 1968
Oct 1968

1969 $0.25
April 1969
June 1969
July 1969
Aug 1969
Sept 1969
Oct 1969
Nov 1969
Dec 1969

1970 - $0.25
Feb 1970
July 1970

--

4030. Basic Stamp bins?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: "Alpaal Ltd." <alpaal@takas.lt>
Message-ID: <3924FF18.2494C88E@takas.lt>
Source record: 60528

Hi, All
I will be gratefull for any information on Basic Stamp II bins (for PIC chip) to make them (stamps) from scratch and entirely by myself.
Thanks a lot.
Andrew.

4031. Re: Wanted: Curve Tracer To Test Homemade Xsistors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: rexa*non*spam*@nspam.dnai.com
Message-ID: <nj2aisceungbalrfta331ithkavq00pp61@4ax.com>
Source record: 60529

On Thu, 04 May 2000 11:46:49 -0700, Lizard Blizzard <nospam@rsccd.org>
wrote:>
>I had always assumed that the Germanium transistors, since they can't be
>passivated, would never last for more than a matter of hours or days,
>because of contamination from the air. Maybe the point contact isn't
>that critical.
>
I have a Sorensen power supply. Not sure, must be late 60's or early
70's. It has 4 2N441 germanium power transistors in its output. A
reference manual from 1973 rates them at IC of 15A. I have thought some
about if its worth fixing if the output stages ever fail, but so far no
need to actually worry about it. Germanium has plenty of drawbacks, but
the transistors of the early era can't be too bad if they are still
working ok.

I have no idea about the actual construction of these transistors.

-Rex

4032. Re: Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <39251C09.EF446C65@netdoor.com>
Source record: 60530

I agree totally with the power line filter to stop/assist in the interference. I have learned also not to el-cheapo store for one. Save your money for any of the Isobar-multi tap line filters. I believe they are the best on the market, and no I don't work for 'em!

Butch KF5DE

HGE wrote:

> robert leavitt wrote in message ...
> >Ok,
> >For once the TV is interfering with my DX work, rather the the ham radio
> >interfering with the TV.
> >When working DX on 20m or below, when ever the TV is on, it acts as a
> signal
> >generator every 15khz(always on to of the rare DX) through the HF bands.
> If
> >anyone knows out how to eliminate or reduce the interference please e-mail
> >me at:
> >aa1uz@arrl.net.
> >
> >Thanks and 73,
> >Drew Leavitt,
> >AA1UZ
> >
> All TV sets have a 15 kHz transmitter built in. It's called the horizontal
> output stage. Even worse, tv's have almost no shielding, and are in plastic
> cabinets so the signal is free to radiate. You can try to reduce the
> interference by using a power line RFI filter at the ham rig and also at the
> TV set. There have been construction articles of these in ham handbooks and
> magazines. Relocating the TV set may not be practical, but that can help
> also.

4033. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8g3e6l$1g76$3@ausnews.austin.ibm.com>
Source record: 60531

In <39245AC1.167EB0E7@my-deja.com>, Martin Meserve <meserve@my-deja.com> writes:
>Reg wrote:
>>
>> Hi list,
>> has anybody got any good ideas for home made insulators
>> for longwires and dipoles etc.
>>
>> just a thought :)
>>
>> 73
>>
>> Reg
>
>My favorite is PVC pipe. You can easily cut it lengthwise
>and create nice strong end insulators. I also use them
>for spreaders on home made open wire line.
>
>Take a look at the following article. The author makes
>good use of PVC spreaders and insulators.
>
>http://www.natworld.com/ars/pages/back_issues/0698_text/ffd.html
>
>Martin
>
>--
>Martin E. Meserve KB7EQS martin.e.meserve
>Engineer, Program/Project Specialist AT
>Lockheed Martin M&DS - Reconnaissance Systems lmco.com
>
>I respond to news groups and E-Mail on my own time and therefore my
>responses may not be as timely as you, or I, would like them to be. If
>I seem to be ignoring you, send me another E-Mail to jog my memory.
>Opinions are my own and do not reflect the opinions of my employer.
>
>-----------== Posted via Deja News, The Discussion Network ==----------
>http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

Be a little careful here. Some PVC has a rather high absorption of
RF fields, which can result in excessive heating of the PVC (and,
thus, softening of it). I seem to remember that it has to do with
some particular chemical properties of the PVC sample in question,
and thus some PVC will work fine in high RF fields, while other PVC
will (over-)heat and melt.

You might try doing a web-search, but I seem to remember that one person advocated inserting a small sample of the PVC that was to be used for an antenna project in a microwave oven (along with a suitable ballast load so that the oven wouldn't blow itself up), and measuring the temperature rise of the sample. Do the web-search for the exact details of the test arrangement, though, before trying it (Flaming PVC in your microwave may be hazardous to your health, especially if your wife finds out!). :*)

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

4034. Re: WTB small Air Variable Caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <392557E6.7FFC3F39@midwestmicro-tek.com>
Source record: 60532

Try these guys, kind of spendy but air variable are not as available as they once were.

http://www.oselectronics.com/ose_p59.htm

Ken Haydu wrote:

> Looking for small air variable caps. Used will be fine. Must accept standard
> 1/4" knobs. Cannot use screwdriver adjustable trimmers. Threaded mounting
> nut type a plus, but screw mounted type considered.
> Any size from 150 pfd down to 10 pfd wanted.
>
> --
> Ken Haydu

4035. Re: Ideas for a Homebrew Shortwave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: blackm00@cam.org
Message-ID: <blackm00-1905001213210001@usrh-5-133.hip.cam.org>
Source record: 60533

In article <8g16iinjs1@slb7.atl.mindspring.net>, mzenier@netcom.com
(Mark Zenier) wrote:

>
> Surfing around a couple months ago, I found a selection of monolithic
> cystal filters on the Fox web site. Stock values were at 10.7, 16.9 and
> 21.4 MHZ. Anyone played with these?
>
> Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

Maybe as much as a decade ago, I saw somewhere a reference that Fox made
crystal filters. Knowing that a cheap source would be wonderful for
homebrewers, I wrote away for a catalog. I may still have the catalog,
but I remember none of the details. However, there were no prices mentioned.
So I wrote them again, asking for a price list. Fox wrote back saying
the information was "proprietary" (I'm certain they used that word). So
I abondoned that project.

My interest in them was as a potential source of cheap crystal filters.
But if they couldn't be bothered giving me an idea of what the price range
might be, then there was no sense in telling the ham world that they
were a source of filters, which had been my intention when I sent away
for the catalog.

I can't remember if any of the filters they made were narrow. Those center
frequencies certainly are common for narrow band FM, so I'd tend to
believe that they are on the wide side. Useful for some things, but
not if we are talking single conversion SSB or CW receivers.

Digi-Key lists some NBFM crystal filters (at 10.7MHz) in their catalog.
There is a small selection of bandwidths and number of poles. (And they
also list some 455KHz filters of more suitable bandwidth but ultimately
I'm not sure they are narrow enough or have good enough skirt selectivity
for SSB and CW use.)

FM-bandwidth filters are relatively easy to find. You are far more likely
to bump into a NBFM receiver than an SSB receiver. So you can find all
kinds of scrap equipment for extracting such filters, and even buy them
easily from suppliers such as Digi-key or surplus outlets.

It's finding those cheap SSB/CW bandwidth filters that is difficult.

Michael VE2BVW

4036. basic ?? about rcvr front-end filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: JGinNY <jwg6@cornell.edu>
Message-ID: <392584CB.35664F7D@cornell.edu>
Source record: 60534

This question regards bandpass filtering following a receiver's rf amp.

Say you have a simple HF or VHF superhet receiver circuit, with an rf-amp stage boosting incoming signals.
At the output of the rf amp, there is a "bandpass filter" to couple the rf to the next stage (the mixer). This bandpass filter consists of two slug-tuned inductors, which are to be adjusted so they resonate at the desired frequency band.

Question: in reviewing some construction projects in the handbooks, I see that often, the two inductors of the bandpass circuit are separated by a metal plate or shield. Why is this? Does the coupling need to be restricted to such a very low amount? In one particular circuit, the two coils are wound at opposite ends of a slug tuned form, about 1/4" diameter and maybe 2.5 inches long. The coil form is installed vertically, through an appropriate hole punched in the chassis, so that one of the coils is situated above the main surface of the chassis, and the other coil is below it. Since in the schematic, both inductances are shown as adjustable, my guess is that there are two slugs in the coil form, one for each winding, with one being adjusted from the top of the form, and the other being adjusted from below. Sound likely?

Why the shielding (chassis or metal plate) between the inductors? Or in other words, what extent of coupling between the rf amp and mixer is sought? (Evidently not much...?)

On a similar note, how is a fairly broad band-pass achieved, so that the signals over an entire ham band will be passed without undesired attenuation? Does this have to do with loose coupling afforded by the shielding between the bandpass coils?
Thanks for any clarification or info...

tnx vy
Joel
nr. Ithaca

4037. Re: basic ?? about rcvr front-end filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <eggV4.56511$701.792991@news4.giganews.com>
Source record: 60535

Joel, the coupling between the resonant circuits determines the bandwidth. Tight coupling means wide bandwidth; conversely, loose coupling will give narrow band pass.

However, the bandpass of a single tuned circuit of ordinary Q is fairly wide, so the coupling between the circuits needs to be controlled to achieve the best compromise.

This is not a simple subject, and it's worth spending some time reading about it. There are many classic texts on the subject.

73, Bob K6DDX

4038. Re: basic ?? about rcvr front-end filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: xpyttl <xpyttl@earthling.net>
Message-ID: <NggV4.81196$h01.575422@news1.rdc1.mi.home.com>
Source record: 60536

JGinNY wrote in message <392584CB.35664F7D@cornell.edu>...
>
>Why the shielding (chassis or metal plate) between the inductors? Or in
>other words, what extent of coupling between the rf amp and mixer is
>sought? (Evidently not much...?)

This is generally done at VHF. Loose coupling generally means steeper skirts. At VHF, the few pf between nearby circuits can represent a lot of coupling (low impedance). This tends not to be needed at HF.

>On a similar note, how is a fairly broad band-pass achieved, so that the
>signals over an entire ham band will be passed without undesired
>attenuation? Does this have to do with loose coupling afforded by the
>shielding between the bandpass coils?
>Thanks for any clarification or info...

In general, yes. You almost need to model these circuits as surprising things sometimes happen, but in general, more coupling means a broader passband. In general, though, it's not a problem to cover an entire band. Typically you want as high a Q as possible to whack off out of band signals. This is somewhat less true of bands like 6 meters where you have wide open spaces.

didleydadidah

4039. Re: Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <yugV4.91046$r37.1193887@news20.bellglobal.com>
Source record: 60537

Butch Magee wrote in message <39251C09.EF446C65@netdoor.com>...
>I agree totally with the power line filter to stop/assist in the
interference.
>I have learned also not to el-cheapo store for one. Save your money for
any of
>the Isobar-multi tap line filters. I believe they are the best on the
market,
>and no I don't work for 'em!
>
>Butch KF5DE
>
One more thing. I read in an old Popular Communications magazine, in "W1FB's workbench" an construction article for RFI filter power outlet. He mentioned that after he had installed the filter at his tv set AND at the ham shack the tv interference went down or disappeared (I can't remember which). If interested, let me know and I will look up the article.

Remove NO_SPAM from e-mail address if replying direct.

4040. RE: Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Juan <novalid@novalid.com>
Message-ID: <8g459o$k31$1@diana.bcn.ttd.net>
Source record: 60538

I have some interference from a neighbor's TV receiver, but it's radiated, not conduced troughout the AC line. It's not very important because they don't like watching TV , but I think some type of High pass filter in the TV set antenna can help. My vertical GP is 6 meter far (or near) their TV antenna.

Juan Miguel, EA6NP

jmperalesxazh@mundiviaxazh.esxazh

obviously, you don't have to believe on xazh

4041. can

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: LES <lwilsonabroomhouse@cableinet.co.uk>
Message-ID: <fyhV4.2691$PZ6.337682@news3.cableinet.net>
Source record: 60539

```
can anyone help i,m looking for the atu for the yaesu ft 757 gx
anyone help
thanks
les
```

4042. Re: FT-2600 Problem Please Help

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Bill and Tracy <tmbc@nf.sympatico.ca>
Message-ID: <GPiV4.92306$so1.1228230@news20.bellglobal.com>
Source record: 60540
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

You could change the channel after all. I though you had to first erase it
but I was wrong. Thanks to all who replied. Have a good weekend.

Bill

"Mark Keith" <nm5k@wt.net> wrote in message news:3925B51A.3A48@wt.net...
> Bill and Tracy wrote:
> >
> > No I want to change channel 1 from 145.000MHz to another frequency. I
know
> > how to delete channels but I can not delete or change channel 1. There
is a
> > note on page 35 of the manual that states "Note that memory channel 1
may
> > not be deleted, as it is the priority channel." I can't seem to figure
it
> > out.
> >
> > Bill
>
> Right, you can't delete, but you should be able to set it like any other
> channel. The priority just hops to ch:1 every few seconds to look for
> activity. MK
> --
> http://web.wt.net/~nm5k

4043. Re: Live voice & text chat for hams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Bill Cromwell <bcromwell1@earthlink.net>
Message-ID: <%GiV4.4748$S31.129690@newsread2.prod.itd.earthlink.net>
Source record: 60541
Cross-posted to: nl.radio.amateur,rec.radio.amateur.boatanchors,rec.radio.amateur.digital.misc,rec.radio.amateur.dx,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.amateur.space,rec.radio.shortwave,tw.bbs.rec.radio.amateur

I do that on 40.

4044. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: Reg <reg@nospamlakeside0.free-online.co.uk>
Message-ID: <KNjV4.549$J5.29638@stones>
Source record: 60542

Yeah cheers for that. I know that the grey stuff has carbon in it. I once made a 2 meter antenna with the stuff and wondered why it didn't work too well:)

73
Reg

>Be a little careful here. Some PVC has a rather high absorption of
>RF fields, which can result in excessive heating of the PVC (and,
>thus, softening of it). I seem to remember that it has to do with
>some particular chemical properties of the PVC sample in question,
>and thus some PVC will work fine in high RF fields, while other PVC
>will (over-)heat and melt.
>
>You might try doing a web-search, but I seem to remember that one
>person advocated inserting a small sample of the PVC that was to be
>used for an antenna project in a microwave oven (along with a
>suitable ballast load so that the oven wouldn't blow itself up), and
>measuring the temperature rise of the sample. Do the web-search for
>the exact details of the test arrangement, though, before trying it
>(Flaming PVC in your microwave may be hazardous to your health,
>especially if your wife finds out!). :*)

4045. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <3925FA62.F7D2EDB1@home.com>
Source record: 60543

The "plasticizers" and "fillers" are Al and Sn compounds (among others) - so they
are metals and absorptive of RF.

(oh man, it's been over 30 years since I took inorganic chemistry.)

Jack

glass2@glass2.lexington.ibm.com wrote:

> In <39245AC1.167EB0E7@my-deja.com>, Martin Meserve <meserve@my-deja.com> writes:
> >Reg wrote:
> >>
> >> Hi list,
> >> has anybody got any good ideas for home made insulators
> >> for longwires and dipoles etc.
> >>
> >> just a thought :)
> >>
> >> 73
> >>
> >> Reg
> >>
> >My favorite is PVC pipe. You can easily cut it lengthwise
> >and create nice strong end insulators. I also use them
> >for spreaders on home made open wire line.
> >
> >Take a look at the following article. The author makes
> >good use of PVC spreaders and insulators.
> >
> >http://www.natworld.com/ars/pages/back_issues/0698_text/ffd.html
> >
> >Martin
> >
> >--
> >Martin E. Meserve KB7EQS martin.e.meserve
> >Engineer, Program/Project Specialist AT
> >Lockheed Martin M&DS - Reconnaissance Systems lmco.com
> >
> >I respond to news groups and E-Mail on my own time and therefore my
> >responses may not be as timely as you, or I, would like them to be. If
> >I seem to be ignoring you, send me another E-Mail to jog my memory.
> >Opinions are my own and do not reflect the opinions of my employer.
> >
> >----------== Posted via Deja News, The Discussion Network ==----------
> >http://www.dejanews.com/ Search, Read, Discuss, or Start Your Own

>
> Be a little careful here. Some PVC has a rather high absorption of
> RF fields, which can result in excessive heating of the PVC (and,
> thus, softening of it). I seem to remember that it has to do with
> some particular chemical properties of the PVC sample in question,
> and thus some PVC will work fine in high RF fields, while other PVC
> will (over-)heat and melt.
>
> You might try doing a web-search, but I seem to remember that one
> person advocated inserting a small sample of the PVC that was to be
> used for an antenna project in a microwave oven (along with a
> suitable ballast load so that the oven wouldn't blow itself up), and
> measuring the temperature rise of the sample. Do the web-search for
> the exact details of the test arrangement, though, before trying it
> (Flaming PVC in your microwave may be hazardous to your health,
> especially if your wife finds out!). :*)
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.

4046. Re: Key ON ignition noise 1990 Chev Suburban

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-19 00:00:00 UTC
From: arronenglish <aenglish15@hotmail.com>
Message-ID: <3925d200_1@127.0.0.1>
Source record: 60544

```
Bill Cromwell wrote in message ...
>There is a regulator somewhere in the dashboard used to stabilize the fuel,
>temp, and oil pressure "gauges". I remember some hams having to bypass that
>gizmo....
```

Thanks. You have confirmed what another NG member told me in private messages. I advised him that I *did* go ahead with my plan to pull all fuses (one at a time) until I found an offending device or group of devices. As you and he guessed, it was a fuse marked "GAGE/IDLE" that fed the apparent noise-maker. He suggested bypassing the hot side of the fuse with a .01�F capacitor. I did and it worked very well.
Now, the noise level from that source is low enough to make the radio useful on all bands while mobile (at least on RX -- I still haven't received my license yet....)
Of course, with that noise gone, I can now hear some true "ignition" noise when the engine is running, but it is low enough that I can wait until I find a good deal on some copper flashing :)
Thanks to all in the NG who responded, publicly and privately. Your help was, and is, much appreciated.
Regards,
Aaron (sigh....two weeks and license still pending....)


```
-----= Posted via Newsfeeds.Com, Uncensored Usenet News =-----
http://www.newsfeeds.com - The #1 Newsgroup Service in the World!
------== Over 80,000 Newsgroups - 16 Different Servers! =-----
```

4047. 26 VDC from 13 VDC voltage doubler cct (abt 7 amps or so) Any Help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: earlve3ab@igs.net
Message-ID: <39267f6a.182492843@news.igs.net>
Source record: 60452

I have all the parts (and some extras) to build a few FET RF
Amplifiers using the IRF 511/530 or similar series. Recent QST
article has a good design that gives gain right up into the 10 mtr
region..before the designs would peter out above 10 MHZ.
Anyways..I'm going to build one..and If im going to use it MOBILE..
Ill need to get the voltage supply up to at least 20 volts ..26 would
be better. Anyone got a good cct for a voltage doubler or some
kind of charge pump that is not too complicated. The regulation
would not have to be that great for my use..73 Earl VE3AB

4048. Wanted Vacuum Relays

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: jackgxyz@one.net
Message-ID: <392617eb_1@news2.one.net>
Source record: 60453

Hi,

I am looking for Jenning's RJ2B and RS8 vacuum relays for a
project. Please email with price and availability if you have
either of these relays.

Please remove the xyz from my email address.

Thanks,

Jack Giehl, WB8BFS

4049. 6 Meter Amplfier Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: glcslc@home.com
Message-ID: <m7qV4.55070$55.430654@news1.sttls1.wa.home.com>
Source record: 60454

I sold the 4-1000 tubes, but still have the cabinet with vaccum variable
15kv,
4-1000 filiament transformer, 3B28 tube rectifiers and 10kv @ 1 amp. with
transformers mounted. Chokes, Tank Coil and output network still intact.

Pole Peg transformer 220 AC in and 5545 AC out. I've ran this transformer
over an amp and it never gets warm. I suspect it's good for 2 amps. It
would
be expensive to ship. Oil filled caps are available too.

Looking for a trade. I need a Honda 350 Watt gas generator
or a big DC to AC inverter. Or...make an offer.
--
George Clute - W7LFD gclute@home.com
ACS, Inc.
P.O. Box 1551
Mercer Island, WA 98040-1551

4050. How to Design Wireless I/O for Computer Soundcard?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: "Raymond T. Joseph" <rjoseph@wt.net>
Message-ID: <39262A7C.2C96443D@wt.net>
Source record: 60455

Any ideas on how I might go about designing, obtaining wireless voice
I/O with my computer for voice input/output?

Ray

4051. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <3SuOPKAhsjJ5EwiN@ifwtech.demon.co.uk>
Source record: 60456

JW wrote:
>The "plasticizers" and "fillers" are Al and Sn compounds (among others) - so
>they
>are metals and absorptive of RF.
>
>(oh man, it's been over 30 years since I took inorganic chemistry.)
>

It shows - hardly a single word of that is true.

A PVC pipe (normal thin-wall semi-rigid plumbing grade) will change the performance of an antenna inside, but mostly due to its dielectric properties changing the resonant frequency.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

4052. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <riiJDNASxjJ5EwC8@ifwtech.demon.co.uk>
Source record: 60457

Grace Cunningham wrote:
>Now that it's summer, it stands to reason, the best way to keep your
>radio cooler, from the hot sun, is to paint that sucker WHITE! Become a
>trend setter. No one I know has a WHITE rig! Go for it! I'm going to put
>clear finish on mine (after painting) to give it that fresh wax shine!
> Good Luck, KE4QOP John
>P.S. Yellow not a bad!

An old trick used for police motorbike radios was to paint the rig black to help dissipate the heat from inside, but to cover the top and sides in a clamshell case painted white to reflect the sunlight. An air gap all around allowed effective cooling of the rig.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

4053. Re: 26 VDC from 13 VDC voltage doubler cct (abt 7 amps or so) Any Help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: Ben Stoop <bstoopXXX@worldonline.nl>
Message-ID: <8g5oam$fa2$1@nereid.worldonline.nl>
Source record: 60458

earlve3ab@igs.net wrote in message <39267f6a.182492843@news.igs.net>...
>
>Anyways..I'm going to build one..and If im going to use it MOBILE..
>Ill need to get the voltage supply up to at least 20 volts ..26 would
>be better. Anyone got a good cct for a voltage doubler or some
>kind of charge pump that is not too complicated. The regulation
>would not have to be that great for my use..73 Earl VE3AB

G3XYM has solved this problem in a practical manner: he uses a 12V 12Ah gel battery. Relay switched in series with the onboard 12 V supply during transmit.
Details to be found on his site:
http://homepages.force9.net/picks/throb.htm

Best regards,
Ben PE1PDR.

4054. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-20 00:00:00 UTC
From: w4pqwhs@aol.com
Message-ID: <20000520081434.00397.00000278@ng-da1.aol.com>
Source record: 60459

Also no one will try to rip it off ..W4PQW Harold

4055. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8gaoctfmn1@nnrp1.deja.com>
Source record: 60460
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

In article <4HYU4.6494$CS3.39434@typhoon.tampabay.rr.com>,
par@parelectronics.com wrote:
> In article <KT_v4.4223$vd7.126791@bgtnsc04-
news.ops.worldnet.att.net>, "Al, N2NKB"
<n2nkb@n2nkb@postoffice.worldnet.att.net> wrote:
> >
> >J M Noeding wrote in message <38c04932.85409650@news.online.no>...
> >>On Fri, 03 Mar 2000 17:41:53 GMT, Ash <ash@vvv.tf> wrote:
> >>
> >>>Hi,
> >>>living quarter of a mile away from a powerful pager-system
transmitter
> >>>makes
> >>>dx-ing rather difficult, interference spread over a BIG spectrum
and I
> >>>need to
> >>>make some filters for 169.5-170MHz to put in front of the pre-amps,
> >>>anyone have any good designs/schematics for easy-to-build filters?
> >>>

Helical filters are ideal for this sort of problem. Toko makes several,
but probably not for your frequency range. You might be able to make
your own. You might find details in the microwave literature.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

4056. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: marc_k@walrus.com
Message-ID: <8gao2q$mq7$1@alice.walrus.com>
Source record: 60461

Ian White, G3SEK (G3SEK@ifwtech.com) wrote:
: JW wrote:
: >Organotin compounds are used as stabilizers for PVC.
: >
: Sure - but in a chemical compound, tin is NOT behaving like metallic tin
: (chemistry lesson #001: the difference between compounds and mixtures)
: so what you said about "metals absorbing RF" is irrelevant.

: >And why bother to use PVC when there are suppliers of better plastics for this
: >purpose (spacers) on the web, wouldn't polycarbonate (Lexan) rod be stronger
: >with
: >better dielectric properties?

: It probably would - but the name of the game is to use whatever is good
: enough... not necessarily the best imaginable.

: >As a matter of fact, GE has its own plastics
: >portal on the web and just bought another (Cadillac) which will sell small
: >quantities with a credit card .
: >
: Only in the country you happen to live in.

: >
: >"Ian White, G3SEK" wrote:
: >
: >> JW wrote:
: >> >The "plasticizers" and "fillers" are Al and Sn compounds (among others) - so
: >> >they
: >> >are metals and absorptive of RF.
: >> >
: >> >(oh man, it's been over 30 years since I took inorganic chemistry.)
: >> >
: >>
: >> It shows - hardly a single word of that is true.
: >>
: >> A PVC pipe (normal thin-wall semi-rigid plumbing grade) will change the
: >> performance of an antenna inside, but mostly due to its dielectric
: >> properties changing the resonant frequency.
: >>

: 73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
: 'In Practice' columnist for RadCom (RSGB)
: http://www.ifwtech.com/g3sek

I've always believed that PVC was ok, unless it was mixed with something
that was conductive.

The standard example:black PVC tends to be lousy:it seems that the stuff
is made with carbon, hence it tends not to be transparent to RF.
But the white kind usually is ok.
The microwave oven test IS a good way to test a sample though.

4057. Re: Homebrew receiver models... which one??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <39298a03@news.alphalink.com.au>
Source record: 60462

> On Sat, 6 May 2000 11:20:18 -0400, in <#8U1z#2t$GA.306@cpmsnbbsa04>,
> in rec.radio.amateur.homebrew "Linda Wolford"
> <Miss-Linda@email.msn.com> wrote:
>
> >I am interested in building my first homebrew reciever, not sure which
> >design I want.

As a first design, I would suggest a NE602-based direct conversion receiver for
80, 40 or 20 metres. I would cover a single band only - multiband equipment is
much, much more complicated than single or dual band gear.

As a beginner, do yourself a favour, and build something with a reasonable chance
of working first time. A simple receiver that give acceptable performance is much
better than a complicated and potentially high performance set that doesn't deliver.

Use a VFO separate from the NE602. If possible use a good tuning capacitor and
vernier dial. Following the NE602 should be a low noise op amp. Component
values should be tailored to reject audio outside 300 - 3000 Hz. You won't need
an RF amp for 80 or 40m. For the audio pwr amp, an LM386 is OK. AGC and
S-meters are useless frills that do nothing for receiver performance.

The above mentioned DC set gives very acceptable performance. It's not perfect,
but should be good enough to spur you on to something better. Don't pull it apart
when finished - make up a DSB or CW transmitter and make it a portable txcvr.

What is that something better? As others have said, the KK7B DC set is very good.
The 74HC4066 is an excellent balanced mixer. It also works on harmonics. This makes
it possible to make a multiband Rx quite easily using just a stable 3.5 MHz VFO.
For the VFO/buffer I used 74HC4004 ICs. This should be in its own box to prevent
hum.

The set consists of the following:

RF amp: 2N3866, 2N3053, BFY51 or 2N4427 (W7ZOI/W1FB?)
Mixer: 74HC4066 - ZS6BZP (Electronics World Feb 98)
LO/Buffer: 74HC4004
Audio stage: 3 transistors - as per KK7B
AF Filter and Diplexer - as per KK7B
AF amp: 4007 biased for linear mode

It's 4 transistors and 3 ICs. Dynamic range and audio reproduction is very good. It covers
40 and 20 metres. Apart from some hum (VFO shielding not perfect) overall performance
is first rate. Of course the audio image is an issue as it is still a DC set. On the performance:
cost scale, sets like this one and the KK7B R1 would be near optimum as they are not much
more complex than the simple designs, but give good results. The above mentioned set took
about 40 hours (over 10 days) to develop.

The receiver is the subject of a future article and further information on it is not yet available.

73,

Peter VK3YE

4058. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Butch Magee <butchkay@netdoor.com>
Message-ID: <392903C5.76EB9FBB@netdoor.com>
Source record: 60463

Well, I don't have the heart to paint mine white, from many years of working with cameras in the desert, white was the order of the day with an umbrella to boot for shade. Film and video cameras just hate heat. You can heat fog film and high speed video cameras (the older ones) could not maintain a white balance with extremes of temperatures. I found this really nice dinner napkin at one of the motels, it was as white a white as you ever saw and was linnen I suppose, slick and shiney, extra tip to the waitress let me carry one out stuffed in my pants. Shame, shame, BUT, it has done a wonderfull job of reducing the temperature of my mobile radios since 1984! Starting with an Icom 730, TS-440 and now a TS-450 and a dash full of motorolas, Just cover the rig up and lock the car up
Butch Magee KF5DE

4059. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Lumpy <lumpy@digitalcartography.com>
Message-ID: <3929077f@news.peakpeak.com>
Source record: 60464

Judging by the recent ads I'd say that
pewter is the 'hot' color this year.

Maybe Apple/Mac will enter the xceiver game
and make their cases transparent blue/red/green...

Lumpy n0eq

4060. Re: High Voltage Probe Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: ma_locksmith <ma_locksmith@email.msn.com>
Message-ID: <OraEjo#w$GA.325@cpmsnbbsa07>
Source record: 60465
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

A high voltage probe is nothing more than a large value resistor that will withstand the high voltage. It is used to make a voltage divider based on the input resistance of the meter. If you use a 20 Mohm input meter, then the probe will work but read approximately twice what the value of voltage is. For a typical 100:1 divider, the meter input resistance is 10 Meg, the probe resistance is 990 Meg. This adds up to 1000 Meg to 10 Meg, or 100 to 1. The same probe in a 20 Meg meter ends up with 1010 Meg to 20 Meg or approximately 50 to 1.

The common input for multimeters is 20K ohms per volt. The only meters with higher input resistance are those that have internal amplifying electronics. If it's an analog meter, then it's probably 20 K. Look on the meter face, it is sometimes stated there.

Ed

<goldenbadger@mindspring.com> wrote in message
news:3928ac05.358870784@nntp.mindspring.com...
> I have a couple questions, both related to high voltage probes -
>
> My second question is how can you determine (i.e. measure) the input
> impedance of a meter? I have a really old cheap one that might be
> 10Mohm if that is a common standard, but would like to confirm before
> I relied on it.
>
> Thanks,
> any help will be really appreciated

4061. Re: Calibrator Crystal Drive Level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: No_Spam@No_Site.ca
Message-ID: <76aW4.291$iF1.25171@198.235.216.4>
Source record: 60466

On 2000-05-21 bob@cq.nu said:
>Newsgroups: rec.radio.amateur.homebrew
>References: <EdTV4.15$iF1.5064@198.235.216.4>
>X-Newsreader: Microsoft Outlook Express 5.00.2919.6700
>Date: Sun, 21 May 2000 19:59:04 GMT
>NNTP-Posting-Host: 24.188.119.29
>X-Trace: news02 958939144 24.188.119.29
(Sun, 21 May 2000 15:59:04 EDT)
>NNTP-Posting-Date: Sun, 21 May 2000 15:59:04 EDT
>Organization: Optimum Online

> I suspect that you are correct in guessing that the big old lump of
> a crystal would take more drive than the new itty bitty one. The
> little part probably has a resistance in the 100K ohm region and is
> likely designed for a drive level in the 1 micro watt (1x10-6 W)
> range. I would guess the old crystal would take about 100X this
> amount of drive.

Prior to my ordering the 100kHz crystal from Digi-Key, I tried various unmarked crystals from surplus computer motherboards, etc. in the circuit by soldering them into an old FT-243 holder and plugging them into the Swan's crystal socket. I suspected most of them would be low-frequency watch crystals (32 kHz or something?) for the on-board clock, but I hoped I'd get lucky. They were identical in physical dimensions to the 100kHz rock I got from Digi-Key, but I never heard ANYTHING out of them at all. Now whether they just weren't oscillating, or they got damaged from too much drive, I can't say. I think I'll try the IC inverter chip oscillator you mentioned in your other post to see if the ones I tried in the Swan are still functional now. I can judge my chances with the new rock from Digi-Key after that.

> Two simple solutions:

> 1) Drop in a little solid state oscillator to run on the 100KHz
> crystal you have and let it drive the tube in the original
> calibrator circuit.

> 2) Get an AT cut based calibrator running with a crystal at
> something like 6.4 MHz and a divide by 64 chip to do the same thing
> with much better accuracy and stability.

Later models of the Swan (the 500CX) had a 100/25 kHz transistorized calibrator in place of the tube calibrator in the model I have here. That seemed much more fuctional, so I was contemplating making an upgrade anyway. Especially since our regional Net and calling frequency is on 3750, and a 25kHz calibrator would enable him to tune it dead on

instead of swishing the dial around waiting for someone to talk. If I'm going to build something, I might as well go up in frequency and use a /N chip as you and WC1F suggested, anyway. I was looking to plug the new crystal into the old circuit just for convenience (not having to hack everything up) and speed (getting the rig back to the owner).

The Swan 500CX calibrator design didn't impress me much. I don't know what style of crystal they used in that version, I've never seen one: http://www.voyageur.ca/~lowsar/temp/500cxcal.gif

Here's the one I'm working with: http://www.voyageur.ca/~lowsar/temp/500cal.gif

> Enjoy
> Bob Camp
> KB8TQ

--

From the keyboard of Alan - VE3NNM (Kenora, ON, CANADA)
E-mail: ve3nnm AT mailcity DOT com
http://members.xoom.com/kenoraradio/
---
posted using NetTamer | The TRUTH about Micro$oft
http://www.nettamer.net/tamer.html | http://www.vcnet.com/bms/

4062. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: n7ws@arrl.net
Message-ID: <39293d24.144503604@news.azstarnet.com>
Source record: 60467

On 20 May 2000 16:56:54 -0400, tmelcon@mit.edu (Terran Melconian) stepped up to earn extra credit and wrote:

>In article <3926b7ae.4639557@news.azstarnet.com>,
>Wes Stewart <n7ws@arrl.net> wrote:
>>What you fail to consider is that the re-radiation of energy is better with a
>>dead (flat) black surface. So the black surface absorbs more, but it also
>>re-radiates more.The surface temperature rise is partially due to the difference
>>between the absorbed IR radiation and that which is re-radiated.
>
>Very true. There are coefficients which one can look up for various
>materials which tell how well it absorbs/radiates. In a first cut
>analysis, this is dependent only on the material, and this is the
>level of detaul which is usually used.
>
>However, the absorbtivity and emissivity are actually a function of
>wavelength, and thus a material cannot really be characterized by a
>single number, but must be characterized by a plot of absorbtivity (or
>emissivity, they are the same) as a function of wavelength. I'm
>looking at such a plot for a sample white paint now; it averages
>around 0.9 with a dip at a wavelength of 4.5 microns and a falloff
>below 2 microns.

This is not my field of expertise, but I do know that when I was working on the design of microwave hybrids, and we used IR scanning to determine temperatures, we used charts of material emissivity to correct the observed temperatures. An alumina substrate and a gold transistor package can be at the same temperature and measure differently on the scanner.

>
>Now, this is important because the wavelength of radiation *from* an
>object (such as a power supply, radio, etc.) is in the infrared
>(unless it's so hot it's glowing). However, the radiation incident
>upon it is largely in the visible spectrum, and is of much shorter
>wavelength. (this is because wavelength decreases with the temperature
>of the radiating body)

Yep. That's why when we try to cool "low grade" heat sources such as the pass transistor in a power supply, we use black heatsinks.
>
>This means that one can use a selective material with a low
>absorbtivity in the visible wavelengths (where it is receiving
>radiation) and a high absorbtivity in the infrared wavelengths (where
>it is emitting) in order to optimally cool it. Traditionally, I
>believe that a layer of white paint (or a reflective silver material)

>is used with a layer of glass, quartz, or something else opaque in the
>IR on top of it.

Good stuff.

Actually there is a "selective material" involved here and that is the window glass in the vehicle. This probably is different within the same vehicle as the windshield is constructed (and tinted) differently from the side glass. Then there is the dependence on whether the solar radiation is direct or diffuse (cloudy day), the angle of incidence on the glass, (how much is reflected) et cetera...So as you say, this is an academic exercise but we don't have all of the necessary data.
>
>This is probably more than you wanted to know.

Can you ever know too much.

4063. Re: High Voltage Probe Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8gbi3u$go6$2@ausnews.austin.ibm.com>
Source record: 60468
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In <OraEjo#w$GA.325@cpmsnbbsa07>, "ma_locksmith" <ma_locksmith@email.msn.com> writes:
>A high voltage probe is nothing more than a large value resistor that will
>withstand the high voltage. It is used to make a voltage divider based on
>the input resistance of the meter. If you use a 20 Mohm input meter, then
>the probe will work but read approximately twice what the value of voltage
>is. For a typical 100:1 divider, the meter input resistance is 10 Meg, the
>probe resistance is 990 Meg. This adds up to 1000 Meg to 10 Meg, or 100 to
>1. The same probe in a 20 Meg meter ends up with 1010 Meg to 20 Meg or
>approximately 50 to 1.
>
>The common input for multimeters is 20K ohms per volt. The only meters with
>higher input resistance are those that have internal amplifying electronics.
>If it's an analog meter, then it's probably 20 K. Look on the meter face,
>it is sometimes stated there.
>
>Ed
>
><goldenbadger@mindspring.com> wrote in message
>news:3928ac05.358870784@nntp.mindspring.com...
>> I have a couple questions, both related to high voltage probes -
>>
>> My second question is how can you determine (i.e. measure) the input
>> impedance of a meter? I have a really old cheap one that might be
>> 10Mohm if that is a common standard, but would like to confirm before
>> I relied on it.
>>
>> Thanks,
>> any help will be really appreciated

I feel I should comment here to inject a word of safety. While
technically correct that a high voltage probe is nothing more than a
large value resistor, there are some other design considerations
which must be considered. Firstly, the insulation on the probe must
be able to withstand the voltages being measured. It's no fun to
have a flashover occur while you're holding the probe on a 30KV
circuit. Don't forget, too, that probes may get dirty or wet, and
that this can significantly reduce their voltage handling capacity.

Nextly, the high value resistor must be able to take the voltage
applied to it. Not all resistors can withstand high voltages, and
they may flashover or breakdown. If this occurs, the minimum damage
you can expect is to fry the meter (Worst case might be frying
yourself!). The power handling capability of the resistor probably
won't be a problem, but it would be good engineering practice to

work the equations to make sure of this.

Another concern involves the switching of the meter. If you're using an older style meter with a mechanical switch, what happens when you operate the switch? Is the input disconnected from one contact before making with another contact? What will be the voltage on the switch when the contacts break? Will this cause the switch to arc over?

Finally, if you're going to be measuring AC voltages with the probe, you'll have to consider the aspect of any capacitance associated with the meter, leads, or probes. 1000M of resistance can result in a significant RC circuit.

So, before attempting to construct your own high voltage probe, please spend a few minutes considering the failure modes possible and the consequences.

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

4064. Re: Help With Interference From TV

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: robert leavitt <leavittkid@mediaone.net>
Message-ID: <_HdW4.19086$OP1.144798@typhoon.ne.mediaone.net>
Source record: 60469

Thanks, everyone. I just got myself a new radio and the cw filters pull out the noise for me.
Now I just need to get the new radio to stop interfering with the TV.

Thanks
Drew
AA1UZ

4065. FT 1000MP audio settings

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Donald Young <dry220@worldnet.att.net>
Message-ID: <nQeW4.87$gt.2467@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60470
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I have heard many FT 1000MP owners with nice well-rounded transmit audio. In many cases they have extremely good bass response. I have heard that this kind of audio can be achieved by adjusting settings in the hidden menus as well as the normal menus. Are there any 1000MP owners out there that can offer suggestions as to the best settings in order to get this nice full audio sound. I find audio like that is very comfortable to listen to when conditions are good. Of course I would reconfigure for a narrower sound when working DX. Thanks in advance for any advice.

Don N2DY

4066. Re: AR88

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Robin Birch <robin@ruffnready.co.uk>
Message-ID: <wPz9zIA0JYK5Ewr8@ruffnready.co.uk>
Source record: 60471

In article <LzxmYLAawBK5Ewfs@g0wbf.freeserve.co.uk>, Barry McCarthy
<barry@g0wbf.freeserve.co.uk> writes
>In article <9+fUJMA+b$J5EwAm@ddwyer.demon.co.uk>, douglas dwyer
><doug@ddwyer.demon.co.uk> writes
>>Apologies if this is not quite the correct news group.
>>Have just bought an AR88 and downloaded a circuit diagram from the Web.
>>Isee getting it going again as a resotration task currently the bulbs
>>light valves get warm and there is an audio hiss.
>>
>>Suggestions would be appreciated relating to sources for replacement
>>valves in the UK.
>>Also any other help.
>>
>
>
>Langrex. 1, Mayo Road, Croydon, Surrey.
>
Also Wilson Valves in Huddersfield.

AR88 is a complicated beast, well not that complicated as it is a
straight superhet, but there is a lot in it.

Right, what could you find.

Firstly, DO NOT run the set without either phones, loudspeaker or a 3
ohm resistor across the LS terminals. The output transformers have a
habit of popping and you wont be able to find one.

Secondly. Check all of the wiring underneath. There should be a huge
wiring loom and any bits that have been mucked about will standout like
a sore thumb.

Thirdly, if you want to redo the IFs then a wobbulator is best so borrow
one before wandering straight in. The RF section is ok with a sig
generator but the IFs need setting up properly.

They do suffer from old paper capacitors. There was an article in the
shortwave magazine of some time ago where a complete rebuild was
described. This will be distinctly non original but it will work well,
depends what you want.

Mains smoother also goes. Noticeable if there is a lot of sticky oil
around the rear of the chassis. Its an oil filled paper capacitor,
again one you will be unlikely to replace.

Get a manual. Tudor Gwilliam Rees (Savoy Publications) will flog you
one. The manual contains the alignment instructions as well as the

circuit diagram.

Finally, which one do you have?. Many of them have had S meters fitted in the front panel which involves removing the name plate. It will probably be a D or an LF. If you can't see a name plate the try the following:

1) Look at wave change switch. If bands continuous from 0.54 MHz to 32 MHz then D. If a longwave band then continuous from about 2MHz up its an LF.

2) Look at back. If a neon fitted near the antenna terminal then its an LF.

Finally - good luck. They are nice sets and well worth restoring if you have a good one. You will develop arm muscles like mike tyson and possibly a hernia. buts that's all part of the fun.

Where are you? I have one of these beasts and have done several repair and tweak jobs to it.

Regards

Robin

Robin Birch robin@ruffnready.co.uk

M1ASU/2E0ARJ/M5ABD Old computers and radios always welcome

4067. Re: HAM EQUIPMENT FOR SALE!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: jyazel@asacomp.com
Message-ID: <392995d9.3733393@news.asacomp.com>
Source record: 60472

For your information, your message is somewhat hard to read.

On Mon, 22 May 2000 00:54:06 -0500 (CDT), chocalatejay@webtv.net (CASH MONEY)
wrote:
>YAESU G1000 ROTOR & BOX $300.00
>AMERITRON AL80B $575.00 [NEW TUBE IN] =A0 DIAMOND WATT METER SX-1000
>$85.00 =A0 =A0 =A0 ASTRON RS70M POWER SUPPLY $150.00 =A0 CUSHCRAFT R7000
>HF VERTICAL $175.00 =A0 =A0 CUSHCRAFT XM520 5 ELEMENT YAGI BEAMS $350.00
>200 FT. OF RG 218 COAX WITH CONNECTORS $70.00
>KENWOOD TS570 SG HF+6M W/DSP UPGRADES $600.00
>=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=
>=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D=3D CONTACT ME IF INTERESTED IN
>ITEMS!!!
>

4068. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8ij7mr.u9i.X@animas.frontier.net>
Source record: 60473

On Mon, 22 May 2000 14:21:42 GMT, Wes Stewart scribbled:
>>
>>This is probably more than you wanted to know.
>
>Can you ever know too much.

Oh, yes you can! Ever look into how hot dogs are manufactured?

Jonesy
--
Marvin L Jones | jonz | W3DHJ | OS/2
Gunnison, Colorado | @ | Jonesy | linux __
7,703' -- 2,345m | frontier.net | DM68mn SK

4069. Re: DIY insulators

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Lyle Koehler <lyle@mlecmn.net>
Message-ID: <3929B3F6.9409522E@mlecmn.net>
Source record: 60474

In rural areas of the US, farm supply stores sell electric fence
"corner" insulators in a plastic (probably polyethylene) egg-type
configuration. They are very inexpensive; something like a buck or two
for a bag of 10, so I don't worry about making my own.
--
Lyle, K0LR

http://www.computerpro.com/~lyle

4070. Re: Calibrator Crystal Drive Level?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <yljW4.7741$yi.41136@news02>
Source record: 60475

Alan,

Both circuits you show are from pretty far back. I would not try to go much further with either one of them.

JAN crystals used to have (15 years ago ....) surplus 6.4 MHz crystals pretty cheap. They made a nice calibrator. A pair of divide by 16 IC's got you down further than you ever needed to go. I suspect they sold out of the original batch by now ..... Hopefully there are more out there.

Bob
KB8TQ

"Alan, VE3NNM" <No_Spam@No_Site.ca> wrote in message
news:76aW4.291$iF1.25171@198.235.216.4...
>
> On 2000-05-21 bob@cq.nu said:
> >Newsgroups: rec.radio.amateur.homebrew
> >References: <EdTV4.15$iF1.5064@198.235.216.4>
> >X-Newsreader: Microsoft Outlook Express 5.00.2919.6700
> >Date: Sun, 21 May 2000 19:59:04 GMT
> >NNTP-Posting-Host: 24.188.119.29
> >X-Trace: news02 958939144 24.188.119.29
> (Sun, 21 May 2000 15:59:04 EDT)
> >NNTP-Posting-Date: Sun, 21 May 2000 15:59:04 EDT
> >Organization: Optimum Online
>
>
> > I suspect that you are correct in guessing that the big old lump
of
> > a crystal would take more drive than the new itty bitty one. The
> > little part probably has a resistance in the 100K ohm region and
is
> > likely designed for a drive level in the 1 micro watt (1x10-6 W)
> > range. I would guess the old crystal would take about 100X this
> > amount of drive.
>
> Prior to my ordering the 100kHz crystal from Digi-Key, I tried
various
> unmarked crystals from surplus computer motherboards, etc. in the
> circuit by soldering them into an old FT-243 holder and plugging
them
> into the Swan's crystal socket. I suspected most of them would be
> low-frequency watch crystals (32 kHz or something?) for the on-board

> clock, but I hoped I'd get lucky. They were identical in physical
> dimensions to the 100kHz rock I got from Digi-Key, but I never heard
> ANYTHING out of them at all. Now whether they just weren't
oscillating,
> or they got damaged from too much drive, I can't say. I think I'll
try
> the IC inverter chip oscillator you mentioned in your other post to
see
> if the ones I tried in the Swan are still functional now. I can
judge my
> chances with the new rock from Digi-Key after that.
>
>
> > Two simple solutions:
>
> > 1) Drop in a little solid state oscillator to run on the 100KHz
> > crystal you have and let it drive the tube in the original
> > calibrator circuit.
>
> > 2) Get an AT cut based calibrator running with a crystal at
> > something like 6.4 MHz and a divide by 64 chip to do the same
thing
> > with much better accuracy and stability.
>
>
> Later models of the Swan (the 500CX) had a 100/25 kHz
transistorized
> calibrator in place of the tube calibrator in the model I have here.
> That seemed much more fuctional, so I was contemplating making an
> upgrade anyway. Especially since our regional Net and calling
frequency
> is on 3750, and a 25kHz calibrator would enable him to tune it dead
on
> instead of swishing the dial around waiting for someone to talk. If
I'm
> going to build something, I might as well go up in frequency and use
a
> /N chip as you and WC1F suggested, anyway. I was looking to plug the
new
> crystal into the old circuit just for convenience (not having to
hack
> everything up) and speed (getting the rig back to the owner).
>
> The Swan 500CX calibrator design didn't impress me much. I don't
know
> what style of crystal they used in that version, I've never seen
one:
> http://www.voyageur.ca/~lowsar/temp/500cxcal.gif
>
> Here's the one I'm working with:

> http://www.voyageur.ca/~lowsar/temp/500cal.gif
>
> > Enjoy
> > Bob Camp
> > KB8TQ
>
> --
>
> From the keyboard of Alan - VE3NNM (Kenora, ON, CANADA)
> E-mail: ve3nnm AT mailcity DOT com
> http://members.xoom.com/kenoraradio/
> --
-
> posted using NetTamer | The TRUTH about Micro$oft
> http://www.nettamer.net/tamer.html | http://www.vcnet.com/bms/
> --
-
>

4071. FS: Unbuilt Norcal NC-20 QRP CW Transceiver Kit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Michael Melland <badger@vbe.com>
Message-ID: <3929C3DC.C6563C19@vbe.com>
Source record: 60476
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.swap

Selling an unbuilt NC-20 kit with optional 10-turn pot. This is the great 20 meter kit that Norcal sold limited numbers of about a year or so ago. I opened the mailing box but haven't ever got around to building it..... and other projects now are calling, so it's for sale. Transceiver kit consists of board, all parts, heavy aluminum pre drilled enclosure, and all controls and knobs. Kit has AFA annunciation to give you your freq in cw as well as a built in TICK keyer.......... output about 5 watts +/- and it is adjustable.

For specs and info see:
http://www.fix.net/~jparker/norcal/nc20/nc20update.htm

Selling price is $110 USD shipped in USA (Canada a little more) We members of Norcal agree not to make money on these projects so I'm selling it at just what I paid for it with the extra 10 turn pot.

Send me an e-mail if you are interested.

73 de Mike Melland, W9WIS
Winneconne, WI

--
Michael Melland, W9WIS
Winneconne, Wisconsin, USA
FISTS #4387, 10-10 #69281, QRP-L #1656,
QRP-ARCI #9875, AK/QRP #478, NorCal,
NJ-QRP #214, SOC #142, Cheeseheads QRP Club
CW, SSB, and Electronics
List Administrator: grundig@qth.net
http://www.qsl.net/w9wis

4072. WTD:DTMF Decoder diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: okieman <okieman@innocent.com>
Message-ID: <LLjW4.538$RO1.88140@nntp3.onemain.com>
Source record: 60477

I am looking for a simple DTMF decoder diagram that will also count up to 4 numbers and then have an inhibit if any further numbers are input. Any help would be appreciated.
THANKS...KC0EH...

4073. WTB RAILROAD MICORS

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-22 00:00:00 UTC
From: Anthony Smitherman <bbw@esper.com>
Message-ID: <3929F02A.313F60EF@esper.com>
Source record: 60478

I am needing to locate several railroad micor radios with the 72 volt boards. If anyone knows of any out there please advise.

Anthony Smitherman
bbw@esper.com

4074. FS/FT large air variable caps

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Ken Haydu <darla@bcinet.net>
Message-ID: <8gedk2$3u9$0@208.133.29.84>
Source record: 60395

I have five larger air variable caps for sale or trade (for smaller air
variable caps with 1/4" shafts)
Hammarlund, 450 pfd, 24 and 23 plates, 3.25 x 4.5 x 7 "
Cardwell, JP48-6D, Split Stator, 48 and 48 pfd, 3 x 2.25 x 6"
Unknown, 17 and 16 plates, 3.25 x 4.5 x 7", Rotor and Stator are seperate
from each other, but otherwise VG condition.
Chelsea Radio, 3 x 4 x 2.5 inches, est 500 pfd
Unknown, antique, 3 x 3 inches, est 500 pfd

A group photo is at:
http://nellie.bcinet.net/darla/caps.jpg

Will sell all for $19 shipped in US

--
Ken Haydu
1 Forest Oak Drive
Southport, NC 28461
910-457-5610

4075. FS Twelve Homebrew Radios

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Ken Haydu <darla@bcinet.net>
Message-ID: <8ged77$34q$0@208.133.29.84>
Source record: 60396

I have 12 homebrew radios for sell. All use one tube, and are of the
Twinplex Regenerative Type. All are fully tested.

Six are "Tom Thumb" models. Just 8 ounces, and measure 3 x 4 x 4.25 ". Their
frequency coverage is:
3.3 to 6.2 mhz, with fine tune, 6SN7 tube
9 to 16 mhz, with fine tune, 6BZ7 tube
3.6 to 4.1 mhz, 80 meter model, no fine tune necessary, 5BK7 tube
11.4 to 17.5 mhz, with fine tune, 6SL7 tube
5.6 to 11.5 mhz, with fine tune, 6BS8 tube
9 to 16.5 mhz, no fine tune, 6SN7 tube

Group photos of the Tom Thumbs are at::
http://nellie.bcinet.net/darla/tom1.jpg
http://nellie.bcinet.net/darla/tom2.jpg
http://nellie.bcinet.net/darla/tom3.jpg

The other six are larger models, measuring 4 x 4.5 x 5 inches. They use
larger antique dials. Frequency coverage is:
9 to 19 mhz, with fine tune, 6SN7 tube
.550 to 1.555 mhz broadcast model, no fine tune necessary, 6BK7 tube
3.2 to 9.8 mhz, fine tune, 6BS8 tube
7.6 to 17.5 mhz, fine tune, 6SL7 tube
5.8 to 16.5 mhz, fine tune, 6SL7 tube
3.4 to 8 mhz, fine tune, 6BQ7 tube

photos of these models are at:
http://nellie.bcinet.net/darla/tom4.jpg
http://nellie.bcinet.net/darla/tom5.jpg
http://nellie.bcinet.net/darla/tom6.jpg
http://nellie.bcinet.net/darla/tom7.jpg

All require 6 vdc filament voltage, and 32 to 54 vdc plate voltage (9 volt
batteries in series). All receive SSB signals as well as AM. Price of any
model is $50 shipped in the US. This reflects the cost of the parts, and a
modest charge for the labor of assembly.

--
Ken Haydu
1 Forest Oak Drive
Southport, NC 28461
910-457-5610

4076. IC 402 batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Harke Smits <harke.smits@net.hcc.nl>
Message-ID: <392AC32B.71BC052@net.hcc.nl>
Source record: 60397

Does anyone know a source for IC 402 NiCad batteries? Used to be Sanyo
N-900C types but I think no longer available.
73 de Harke PA0HRK

4077. Linux filter software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <392ACDDE.85AEE85@clifto.com>
Source record: 60398

Anyone know of any filter design software for Linux? I can't find any.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4078. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <mgAW4.154$xJ2.3091@news.itd.umich.edu>
Source record: 60399
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Reg-
Your suggestion is a good one. The elementary part would have to include more than a paragraph of explanation of why/how.

Bias is what I am concerned with mostly. The reason to bias is simple, it needs some current in the base to turn it on. I want to know how to determine how much and the effect on the other end. Also what current is essential and what current is not. I have a very basic circuit, collector feedback bias, common emitter, with a 330 resistor in parallel with the collector/base junction and a 1K resistor above that. The !K resistor is in series from the battery to the juntion of the collector and bse bias resistor.

There is no emitter resistor.

the kind of things I want to determine are the idle current, base current, emitter current, DC inout resistance, DC Output resistance, AC input impedance, AC output impedance, methods of coupling stages, how much feedback is enough to oscillate a stage, how much input impedance is good for buffer amplifiers and such.
I want to be able to determine the biasing and coupling using Voltage Divider, self bias etc.

Tall order?

Curtis Scholl
cscholl@izzy.net

Reg Edwards wrote in message <8ge5al$ha9$1@neptunium.btinternet.com>...
>May I suggest a book of elementary transistor theory which will
>includes the principles of transistor biassing. Nearly all components
>in a transistor amplifier are there just for bias and decoupling. Its
>a relatively simple subject. You would then be able to draw your own
>circuits with component values. Much more satisfying.
>--
>Regards, Reg.

4079. Re: Question for you mobile guys

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <392AD96A.36F8@ixpres.com>
Source record: 60400

Dan OM,

The 'Screwdriver' mobile antenna enables remote tuning over several bands, from the driver's seat. It always requires a top whip to function, as do all vertical whip mobile antennas. You can make your own or purchase one from several vendors. It is an expensive, bulky solution as mobile antennas go. What price multiband remote-tuned operation? That depends on your operating style.
As for me, I have been running mobile CW for almost 30 years now, and I have found no need for band changing on the fly at all. So I use single-band Hustler resonators, whip, and bumper mount on my three cars. Works like a champ, and is cost-effective. I remove my whip every day at work and store it inside, because I cover my car (keep sun off it). Only takes seconds to remove or reinstall the entire antenna. No coil springs or guy lines are required. This is a big advantage for my kind of usage.
All center-loaded antennas of reasonable construction exhibit similar radiating efficiency, Screwdrivers included.
I highly recommend that one do some mobile operation FIRST, with single-band antennas, and then determine their need for multiband operation, if any.

73,
Don, W6JL

Dan Richardson wrote:
>
> Hi all,
>
> I had a friend ask me a question regarding the screwdriver type
> antenna and having no experience in this area post it here for your
> input.
>
> The question is:
>
> I was wondering if you had any experience with this type of antenna
> (screwdrive type mobile antenna). I'm told you can use these without
> the whip on the top making it a relatively short antenna. I would
> think though without the whip it would probably work more like a
> rubber duck or a bumper mounted dummy load.
>
> ------
>
> And you opinion is?
>

> Danny, K6MHE

--
ï¿½ï¿½à¡±ï¿½

4080. Re: Filter for 169.5-170MHz

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <3929a504.694641294@news.online.no>
Source record: 60401
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.antenna

On Mon, 22 May 2000 07:42:22 GMT, Leon Heller
<leon_heller@hotmail.com> wrote:

>Helical filters are ideal for this sort of problem. Toko makes several,
>but probably not for your frequency range. You might be able to make
>your own. You might find details in the microwave literature.
>
>Leon
>--
>Leon Heller, G1HSM

well, I would say - coax cable filters are ideal to sort of the
problem, but you need to use heliax cable, and the circuit is somewhat
more elaborate than just pure coax cable, it is a smaller coupling
capacitor and a tuning capacitor down near the end

once made such filter to improve 2m repeater filter, with only 600kHz
between pass and notch frequency, it is a relation between the notch
depth and frequency separation, so for this repeater application the
filter has only 15dB noch, but it is worth it - compared to other
filters for similar improvement

DL7ZX also describes an application of xtal filters, they are
sometimes very useful, he used such filter to remove blocking of a 2m
beacon mounted on same site as repeater, with 300kHz frequency
difference

73 jan-martin
LA8AK

4081. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: "W. Richards" <war11@eznet.net>
Message-ID: <siltv0mao125@corp.supernews.com>
Source record: 60402
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Noble Publishing has as an "electronic book" on a CD call "ELEKTA Professional" which has some "TOOLS" which will do what you want, but the text part is pretty lame on theory and how to bias transistors.

www.noblepub.com

Bill

Curtis Scholl wrote in message ...
>To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on biasing
>transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.
>
> I had a book by Malvino, Yellow binding, printed around 1973 as a
>textbook in college. I think it was "Electronics Principles".
>
> In the book there were explanations and experiments based on
>instrumentation. There were diagrams of configurations, hybrid parameters,
>both DC and AC.
>It was a wonderful book but it assumed too much would be remembered from
one
>experiment to the next. It left me behind 25 years ago.
>
> I want a book that is for designing transistor amplifier, oscillator,
and
>buffer stages for common emitter, common collector, common base and the
bias
>methods like self bias, voltage divider bias, collector feedback bias,
>determining the load line (without a transistor tester) based on the
>parameters of the device.
>I don't want the answers, just the means to determine the answers from the
>hybrid parameters and their relationships.
>I would like to be able to calculate the input impedance
>and the output impedance of an AC circuit.
>
> I would prefer a book where transistors are not subset of a larger book.
>The book I seek is only about transistor circuit design. I would prefer a
>practical versus theoretical design base of knowledge. Voltages using
>Electron Flow would be desireable. The book should have more of an
>explanation of the parameters involved than my old Malvino book did.
>
> I have the design manuals of W1FB and the ARRL. Even "Solid State Design
>for the Radio Amateur" leaves something to be desired. It is a great book,

>but unclear in some areas that I would prefer to be knowledgeable in.
>
>Any one out there have any suggestions?
>
>I have been to Borders, Barnes & Noble, and no soap except large books with
>calculations and no real explanation.
>
>Thanks in advance
>
>Curtis Scholl
>KG8SU.
>cscholl@izzy.net
>
>
>

4082. Re: Linux filter software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392AFDB1.901FF458@agilent.com>
Source record: 60403

What kind of filters and what kind of design? I believe you can get
SciLab (for free) for Linux, and it has some good tools for making
digital (discrete-time) filters and for finding pole and zero
locations for continuous-time filters. I use it regularly for
both...but that might not be at all what you're looking for.

Cheers,
Tom

"Clifton T. Sharp Jr." wrote:
>
> Anyone know of any filter design software for Linux? I can't find any.
>
> --
> +-+
> | Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
> | WA9PDM | |
> +-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4083. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <392b0298.41828965@news.eunet.yu>
Source record: 60404
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

4084. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: "W. Richards" <war11@eznet.net>
Message-ID: <sim1s772o1147@corp.supernews.com>
Source record: 60405
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

W. Richards wrote in message ...
>Noble Publishing has as an "electronic book" on a CD call "ELEKTA
>Professional" which has some "TOOLS" which will do what you want, but the
>text part is pretty lame on theory and how to bias transistors.
>
> www.noblepub.com
>
>
>Bill
>
>
The best book I have found on biasing transistors is "RF CIRCUIT DESIGN" by
Chris Bowick, starting on page 117. It is published by "HOWARD W. SAMS &
CO.".

Bill

>
>Curtis Scholl wrote in message ...
>>To Whom it may concern:
>>
>> I seek a book on electronics/transistors with a concentration on
biasing
>>transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.

4085. Re: Needed..HomeBrew DTMF Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: john graesser <graesser@tca.net>
Message-ID: <sim5liqgo1131@corp.supernews.com>
Source record: 60406

<fretman_2@my-deja.com> wrote in message news:8gean2$lr4$1@nnrp1.deja.com...
> I have a non-dtmf VHF radio. Does anyone have a suitable schematic to
> build a DTMF microphone (or DTMF pad) so I can access the local phone
> patch?
>
> Thanks!
>
> Bill
> KD4PWB
>
After looking at what the parts cost, I went to radio shack and bought a
phone dialer. One of those little calculator size gizmos with a speaker on
the back. If I hold it against the mic, it will pass dtmf well enough to use
the local repeaters with either my icom 706mkiig or my htx200.
thanks, John.
kc5dwd

4086. Sam's Fotofacts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: k4yz@aol.com
Message-ID: <20000523195353.11524.00000883@ng-cd1.aol.com>
Source record: 60407

Does anyone have a URL for Sam's?

Steve, K4YZ

The nation that is ready to fight in peacetime is less likely to HAVE to fight in wartime......(Author unknown, but he probably wasn't a politician!)

4087. how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <392B26BC.6B7457A2@izzy.net>
Source record: 60408
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

Hi Group:

I have a number of schematic diagrams with crystals in one frequency
or Variable with loading. How does on create an equivalent circuit with
the same characteristics of a crystal? what is involved?
1. I would assume a resistance of the crystal itself
2. I would assume an equivalent "loading" to match the capacitance of
the crystal
3. Maybe Q is important?

I would, given my understanding, that the crystal has a high internal
resistance? One cannot just replace the crystal with a tuned series or
parallel LC combination.
Am I rehashing an old subject?

Curtis Scholl
cscholl@izzy.net

4088. Who was selling microwave mixers at Dayton?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Dennis Sweeney <dsweeney@vt.edu>
Message-ID: <392B21DC.F1BEDBBD@NOSPAMvt.edu>
Source record: 60409
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew

I bought several microwave mixers at Dayton. They are a little aluminum block with a WR34 waveguide output, a SMA LO input and, a SMA IF output. They were made by Marki Microwave and they were designed for harmonic mixing. At $20 a piece they were a good deal and the vendor must have been over a hundred of these parts.

Unfortunately, I did not get the name of the vendor. If you know who the vendor is and how I can contact him, please email me.

Thanks,

Dennis Sweeney
WA4LPR
dsweeney@vt.edu (or remove the "NOSPAM" from the return address)

4089. Re: Basic Stamp bins?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: "Keith E. Spainhour" <KSpainhour@wilkes.net>
Message-ID: <392B33E0.909DA834@wilkes.net>
Source record: 60410

Hello,
I don't know if your design is flexible or not, But if you want a really inexpensive way to program a micro controller in BASIC, try BASCOM-AVR for the Atmel AVR micro controllers. A free demo is available that will program up to 2k, the limit of on chip flash in some of the processors. Which is another plus, Flash is reprogrammable, no OTP devices. The programmer is a simple connection to the parallel port on a PC, BASCOM-AVR programs the chip for you.
I am in no way associated with either company, I just downloaded the software, and ordered some parts online. AVR micro controllers are available from a few companies for online order.

http://www.mcselec.com/

Also Dontronics has a board and kit available for the AVR,

http://www.Dontronics.com/

Take Care,
Keith Spainhour
KT4XW

"Alpaal Ltd." wrote:
>
> Hi, All
> I will be gratefull for any information on Basic Stamp II bins (for PIC
> chip) to make them (stamps) from scratch and entirely by myself.
> Thanks a lot.
> Andrew.

--
73 DE KT4XW
Keith Spainhour
KSpainhour@wilkes.net

4090. Re: FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: hillbillydave <davesNOdaSPAM@oztech.com.invalid>
Message-ID: <2174e686.4de7ea38@usw-ex0101-005.remarq.com>
Source record: 60411
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

i wou8ld be interested in the AM Board and filters for the ZD

dave KG5XR

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

4091. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: jyazel@asacomp.com
Message-ID: <392aef79.11007488@news.asacomp.com>
Source record: 60412
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

On Tue, 23 May 2000 07:51:05 -0400, "Curtis Scholl" <cscholl@izzy.net> wrote:

>To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on biasing
>transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.
> ----------- SNIP ---------

Have you tried your library?

4092. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Bob <balbert@cnmnetwork.com>
Message-ID: <fDKW4.115797$MB.2260045@news6.giganews.com>
Source record: 60413

First of all, those old calibrators usually used a 100 kHz crystal. Since they were in an oscillator circuit that was class C (or close to it), the waveform was usually a sinusoid clipped on one peak. So it was rich in all harmonics.

It's very rare to have a good square wave in such circuits. So there is never a problem getting strong signals on both even and odd harmonics.

73, Bob K6DDX

4093. ...and miles to go before I sleep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: L <john@clavin.freeserve.co.uk>
Message-ID: <8gcgmm$g4s$1@newsg4.svr.pol.co.uk>
Source record: 60479

OK, you guys, any ideas as to what the numerous Shortwave "Numbers" stations are? Is there a hidden code in the numbers themselves? Perhaps there is some kind of tone encoding. Maybe there is interaction between Numbers stations on seperate frequencies, and where abouts are they transmitting from? I thought the cold war was over..... Maybe there is a simple explanation to all this...

John, G0WPA.

4094. Need Old Tech Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: k4yz@aol.com
Message-ID: <20000522232641.23303.00000861@ng-fy1.aol.com>
Source record: 60480

I need a tech manual for a Sonar Model G 11 meter transceiver. I picked it up basically as a "nostalgia" item at Dayton, but would like to try to get it operational

I also need an original Sonar mic.

Direct e mail responses would be deeply appreciated.

Thanks and 73

Steve, K4YZ

The nation that is ready to fight in peacetime is less likely to HAVE to fight in wartime......(Author unknown, but he probably wasn't a politician!)

4095. Re: links to qrp rigs

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: rich a <rckchp@home.com>
Message-ID: <392A0AE6.1025459D@home.com>
Source record: 60481

try here:

http://www.qrpworld.com/welcome.htm

and here:

http://ac6v.com/pageay.html

and here:

http://www.alltel.net/~johnshan/links_qreq.html

mojaveplan@my-deja.com wrote:
>
> a while back, someone posted a link to a page that had links to almost
> all the qrp kit manufacturers one could imagine. of course, my pc
> crashed and i lost the link page. if you have a link that has lots of
> qrp kit mfgr's links could you please post it. thanks to all. 73
> jeff n7aiz
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

4096. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: rich a <rckchp@home.com>
Message-ID: <392A0CA4.5E29ECA7@home.com>
Source record: 60482

Suggest looking in boating magazines, specifically ones dealing with cruising or offshore sailing.....many windpower equipment manufacturers advertise there.

Grace Cunningham wrote:
>
> Has anyone come up with a plan to use a car alternater to charge deep
> cycle batteries using "wind power". I like QRP, one windy day will keep
> me going a long time! KE4QOP John

4097. Re: Elecraft K2 HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: rich a <rckchp@home.com>
Message-ID: <392A0F31.5BEBF59@home.com>
Source record: 60483

Go to : http://www.elecraft.com/ and subscribe to the elecraft email list......after reading it a for a few days you'll get a feel for the excellent (and very rapid) support given by the builder's group , and Elecraft support. You often see questions about problems answered directly by Wayne or Eric, the company owners/co-designers of Elecraft.....you'd never see that from Icom,Yaesu,Kenwood.

Grace Cunningham wrote:
>
> I've been shopping for my first rig and wondered if the K2 would be a
> good starter radio. I've built QRP rigs before, so building the radio
> should be fun. What is the difference between the K2 and starter rigs
> like the Alinco DX-77, Icom 707,Yaesu FT-840 and Kenwood's TS-50?;
> (other than those rigs have 100 watts) As you can tell I am some what
> new to hf. Please email me or post to the group what you know. Many
> thanks, KE4QOP John

4098. Re: Wind Mill Power Plant

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Chris <chris@chrisss.demon.co.uk>
Message-ID: <959066116.25668.0.nnrp-12.c1c34069@news.demon.co.uk>
Source record: 60484

Hi
The Centre for alternative energy has a book

http://www.cat.org.uk/shopping/SearchResultsCategory.tmpl

also

http://forums.cosmoaccess.net/forum/survival/prep/library2/windturb.htm

--
Chris Selwyn-Smith M0CGW
chris@chrisss.demon.co.uk
http://www.chrisss.demon.co.uk/

4099. Re: FT 1000MP audio settings

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Dan/W4NTI <w4nti@my-deja.com>
Message-ID: <8ge4vdher1@nnrp1.deja.com>
Source record: 60485
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

In article <nQeW4.87$gt.2467@bgtnsc04-news.ops.worldnet.att.net>,
"Donald Young" <dry220@worldnet.att.net> wrote:
> I have heard many FT 1000MP owners with nice well-rounded transmit
audio. In
> many cases they have extremely good bass response. I have heard that
this
> kind of audio can be achieved by adjusting settings in the hidden
menus as
> well as the normal menus. Are there any 1000MP owners out there that
can
> offer suggestions as to the best settings in order to get this nice
full
> audio sound. I find audio like that is very comfortable to listen to
when
> conditions are good. Of course I would reconfigure for a narrower
sound when
> working DX. Thanks in advance for any advice.
>
> Don N2DY
>
>
Depending on your voice....First off set your md-100 mic (assuming you
have that one) the the "THRU" position. And try these sets. They work
for me.
FT1000MP Menu sets used by W4NTI.

2-9 autonotch (for carrier ellimination, ssb)
must be out for cw, use IF Notch on cw.

4-4 Tx EDSP, set to 4. (You may need to '
play with this for your voice).

4-5 SSB Lpf 3200
SSB Hpf 100
A1 Bpf 60 for digging, 120 for
normal.
A3 Lpf 3200 (default)
A3 Hpf 100 (default)
dig fil PKT (default)

7-1 Keyer Dot 10

7-2 tyr Dash 35

7-5 Keyer Bk-In .18 to .26 (amp drop out)

7-7 SSB r 100-3100 Adds RX Bass
SSB t 200-3100 Adds TX Bass
cu-r on (default)
An-r on(default)

8-2 Split operation nor(default)

8-4 Front end RF amp Flat for all band
operation/ Tuned for
ham bands only.
I use tuned mostly.

8-9 r-LSB carrier -0.000
t-LSB -0.100
Proc-LSB -0.050
r-USB carrier -0.000
t-USB -0.100
Proc-USB -0.050
t-A3-car -1.080

Here is how to get to the "hidden menue". When
you bring it up, record EVERY setting in case you
mistakenly change something.

With radio in OFF position. Push "FAST and LOCK", then POWER ON.
Release buttons. Select
normal menue by pushing FAST and ENTER. Dial
up past 8-9 and there is menue 9.

To make radio xcve everywhere go to 9-9 and
select GEN.

To vary IF rx Gain, go to 9-1. I raised mine from 10
to 12.

Hope this get's you started and have fun.

POWER on SETTINGS

28 + POWER Resets ALL menu settings to factory default.

SUB + ENT + POWER Resets ALL memories (except menu settings)
to factory defaults.

SUB + 29 + POWER CPU Master reset for ALL memories and menu settings.

Dan/W4NTI

Sent via Deja.com http://www.deja.com/
Before you buy.

4100. Needed..HomeBrew DTMF Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8gean2$lr4$1@nnrp1.deja.com>
Source record: 60486

I have a non-dtmf VHF radio. Does anyone have a suitable schematic to build a DTMF microphone (or DTMF pad) so I can access the local phone patch?

Thanks!

Bill
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

4101. I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <P9uW4.141$xJ2.1778@news.itd.umich.edu>
Source record: 60487
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

To Whom it may concern:

I seek a book on electronics/transistors with a concentration on biasing transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.

I had a book by Malvino, Yellow binding, printed around 1973 as a textbook in college. I think it was "Electroncis Principles".

In the book there were explanations and experiments based on instrumentation. There were diagrams of configurations, hybrid parameters, both DC and AC.
It was a wonderful book but it assumed too much would be remembered from one experiment to the next. It left me behind 25 years ago.

I want a book that is for designing transistor amplifier, oscillator, and buffer stages for common emitter, common collector, common base and the bias methods like self bias, voltage divider bias, collector feedback bias, determining the load line (without a transistor tester) based on the parameters of the device.
I don't want the answers, just the means to determine the answers from the hybrid parameters and their relationships.
I would like to be able to calculate the input impedance
and the output impedance of an AC circuit.

I would prefer a book where transistors are not subset of a larger book. The book I seek is only about transistor circuit design. I would prefer a practical versus theoretical design base of knowledge. Voltages using Electron Flow would be desireable. The book should have more of an explanation of the parameters involved than my old Malvino book did.

I have the design manuals of W1FB and the ARRL. Even "Solid State Design for the Radio Amateur" leaves something to be desired. It is a great book, but unclear in some areas that I would prefer to be knowledgeable in.

Any one out there have any suggestions?

I have been to Borders, Barnes & Noble, and no soap except large books with calculations and no real explanation.

Thanks in advance

Curtis Scholl
KG8SU.
cscholl@izzy.net

4102. Re: FT 1000MP audio settings

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: BarryG <bgNOSPAM@albany.net>
Message-ID: <8gdqs5meo1@news.monmouth.com>
Source record: 60488
Cross-posted to: alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

Check http://www.qsl.net/n1eu/Yaesu/MPsetup.htm

Be sure to read the update at the bottom of the page. Settings are given
for audiophile, middle of the road, and contesting transmit audio.

http://www.qsl.net/n1eu/Yaesu/MPGoldLine.htm might also be worth a read.

GL/73,
Barry N1EU

Donald Young <dry220@worldnet.att.net> wrote in message
news:nQeW4.87$gt.2467@bgtnsc04-news.ops.worldnet.att.net...
> Are there any 1000MP owners out there that can
> offer suggestions as to the best settings in order to get this nice full
> audio sound

4103. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Robin Birch <robin.birch@postoffice.co.uk>
Message-ID: <959086156.882281@igateway.postoffice.co.uk>
Source record: 60489
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Curtis Scholl wrote in message ...
>To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on biasing
>transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.
>
I can think of two, no three, ones that might help. One is in the ARRL library, it is an RF design book, soft covered in red paper. Can't remember the exact title. The second is Handbook of Electornic Calculations - McGraw Hill, hard bound, it covers a lot more than just amplifier design so you may want to borrow it rather than buy. The third is called, I think, transistor circuits. All of these treat bipolars fairly well, they are not so good with FETs.

Robin
> I had a book by Malvino, Yellow binding, printed around 1973 as a
>textbook in college. I think it was "Electroncis Principles".
>
> In the book there were explanations and experiments based on
>instrumentation. There were diagrams of configurations, hybrid parameters,
>both DC and AC.
>It was a wonderful book but it assumed too much would be remembered from
one
>experiment to the next. It left me behind 25 years ago.
>
> I want a book that is for designing transistor amplifier, oscillator,
and
>buffer stages for common emitter, common collector, common base and the
bias
>methods like self bias, voltage divider bias, collector feedback bias,
>determining the load line (without a transistor tester) based on the
>parameters of the device.
>I don't want the answers, just the means to determine the answers from the
>hybrid parameters and their relationships.
>I would like to be able to calculate the input impedance
>and the output impedance of an AC circuit.
>
> I would prefer a book where transistors are not subset of a larger book.
>The book I seek is only about transistor circuit design. I would prefer a
>practical versus theoretical design base of knowledge. Voltages using
>Electron Flow would be desireable. The book should have more of an
>explanation of the parameters involved than my old Malvino book did.
>

> I have the design manuals of W1FB and the ARRL. Even "Solid State Design
>for the Radio Amateur" leaves something to be desired. It is a great book,
>but unclear in some areas that I would prefer to be knowledgeable in.
>
>Any one out there have any suggestions?
>
>I have been to Borders, Barnes & Noble, and no soap except large books with
>calculations and no real explanation.
>
>Thanks in advance
>
>Curtis Scholl
>KG8SU.
>cscholl@izzy.net
>
>
>

4104. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: magne@radar.no
Message-ID: <xFwW4.10661$C9.190126@news1.online.no>
Source record: 60490
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

In article <959086156.882281@igateway.postoffice.co.uk>, "Robin Birch"
<robin.birch@postoffice.co.uk> wrote:
> One is in the ARRL
>library, it is an RF design book, soft covered in red paper. Can't remember
>the exact title.

I must admit I find this book a bit on the theoretical side. It's
great if you know the basics of solid-state design (and/or have a
degree in mathematics) but as an introduction to practical
design it leaves a lot to be desired.

Perhaps a couple of the chapters from "The Art of Electronics"
(Horowitz & Hill) are better suited (although they treat mainly LF circuits).

I would really like to see other suggestions...

--Magne / LA1BFA

4105. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ge5al$ha9$1@neptunium.btinternet.com>
Source record: 60491
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

May I suggest a book of elementary transistor theory which will
includes the principles of transistor biassing. Nearly all components
in a transistor amplifier are there just for bias and decoupling. Its
a relatively simple subject. You would then be able to draw your own
circuits with component values. Much more satisfying.
--
Regards, Reg.
==========
Curtis Scholl <cscholl@izzy.net> wrote in message
news:P9uW4.141$xJ2.1778@news.itd.umich.edu...
> To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on
biasing
> transistors (bipolar/mosfet/jfet etc) that doesn't leave one
hanging.
>
> I had a book by Malvino, Yellow binding, printed around 1973 as a
> textbook in college. I think it was "Electroncis Principles".
>
> In the book there were explanations and experiments based on
> instrumentation. There were diagrams of configurations, hybrid
parameters,
> both DC and AC.
> It was a wonderful book but it assumed too much would be remembered
from one
> experiment to the next. It left me behind 25 years ago.
>
> I want a book that is for designing transistor amplifier,
oscillator, and
> buffer stages for common emitter, common collector, common base and
the bias
> methods like self bias, voltage divider bias, collector feedback
bias,
> determining the load line (without a transistor tester) based on the
> parameters of the device.
> I don't want the answers, just the means to determine the answers
from the
> hybrid parameters and their relationships.
> I would like to be able to calculate the input impedance
> and the output impedance of an AC circuit.
>
> I would prefer a book where transistors are not subset of a

larger book.
> The book I seek is only about transistor circuit design. I would
prefer a
> practical versus theoretical design base of knowledge. Voltages
using
> Electron Flow would be desireable. The book should have more of an
> explanation of the parameters involved than my old Malvino book did.
>
> I have the design manuals of W1FB and the ARRL. Even "Solid State
Design
> for the Radio Amateur" leaves something to be desired. It is a great
book,
> but unclear in some areas that I would prefer to be knowledgeable
in.
>
> Any one out there have any suggestions?
>
> I have been to Borders, Barnes & Noble, and no soap except large
books with
> calculations and no real explanation.
>
> Thanks in advance
>
> Curtis Scholl
> KG8SU.
> cscholl@izzy.net
>
>
>

4106. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Michael Black <blackm00@Gloria.CAM.ORG>
Message-ID: <Pine.LNX.4.10.10005231046460.16093-100000@Gloria.CAM.ORG>
Source record: 60492
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

On Tue, 23 May 2000, Curtis Scholl wrote:

> To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on biasing
> transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.
>[lots deleted]

I can't give you any specifics.

But there have been articles about biasing bipolar transistors in various hobby magazines over the years. They'd include equations for getting the right values, but they were a generalized approach.

Once hand held calculators became cheap, I think we saw a rise in equations in the various ham magazines. In the late seventies, Ham Radio magazine had a number of articles about using programmable calculators to design various things that most up till that point would otherwise have picked out of a cookbook.

One series in QST comes to mind. It must have been 1974 or so. "Learning to Work with Semiconductors". It went through quite a bit of territory, with practical circuits but also equations. I can't remember if it dealt with transistor biasing, but I do recall that it was a good place to look for how to compute capacitor values in various oscillator circuits, and figuring out transistor power output circuitry. It was not for the professional, but for the beginner who wanted to do more than copy a circuit from somewhere.

For a while, the ARRL published a booklet that contained the articles in that series, but it didn't seem to be available for all that long. I thought that was a mistake. While some of the material ended up in other ARRL publications (I see an echo of it in Solid State Design for the Radio Amateur), it is a shame they didn't keep it as a book. Of course, with QST on CD-ROM, the series is readily available now.

Someone mentioned "Introduction to Radio Frequency Design" by Wes Hayward and now published by the ARRL. I think it's a worthwhile book but it's a bit hard to place. It covers some areas that isn't covered in the usual ham books, or in a different tone, but in some areas I was expecting deeper coverage. My reason for mentioning it, though, is that it comes with a disk of programs for computing various RF-related items. I can't run it at the moment, but I recall there is a program for determining the biasing of bipolar transistors, and another for biasing FETs., along with programs for designing filters of various

kinds.

Michael VE2BVW

4107. FS: Pair of Eimac SK-406 (3-500Z) Chimneys

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: Jon <toomuchstuff@pobox.com>
Message-ID: <HjxW4.23922$T41.571777@newsread1.prod.itd.earthlink.net>
Source record: 60493
Cross-posted to: alt.ham-radio.marketplace,alt.radio.cb.skip,rec.radio.amateur.boatanchors,rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

$ 60.00 shipped conus. Respond toomuchstuff@pobox.com.

Check the other goodies at www.hightechspecialties.com too.

4108. Looking for ...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-23 00:00:00 UTC
From: "guy.f2lq" <guy.f2lq@wanadoo.fr>
Message-ID: <8geb6jjo1@wanadoo.fr>
Source record: 60494

From F2lq

I am looking for an amplifier running on 50 Mhz for a FT 767 gx Yaesu a:

M 57735

If you have this Hybride amp...

Thanks for my friend F1RYH !

Guy F2LQ

4109. Re: WTD:DTMF Decoder diagram

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8gf1j9stu1@lola.ctv.es>
Source record: 60414

I am also looking for a simple DTMF decoder project.

I need to connect the external speaker output from a Amateur Radio to a DTMF decoder board that will allow me to switch 12 relays on and off by transmitting standard DTMF tones to the receiver.

The idea is to make a small controller for a 10GHz ATV transmitter. For example, A DTMF tone of "1" will turn the TX on. A DTMF tone of "0" will turn the ATV TX off. A camera will be mounted on a swivel mount and a DTMF tone of "2" will raise the camera and a DTMF tone of "8" will lower the camera. A tone of "4" and "6" will move the camera left and right.

A few years ago I had a project made from a IC called a M967 that allowed DTMF decode in this way. I am looking for a similar design to make. I have since lost the design and am looking for a similar project.

I look forward to your reply.

73 de Colin

okieman wrote in message ...
>I am looking for a simple DTMF decoder diagram that will also count up to 4
>numbers and then have an inhibit if any further numbers are input. Any help
>would be appreciated.
>THANKS...KC0EH...
>
>

4110. Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: maddog@io.com
Message-ID: <392b44b1.2317040@news.io.com>
Source record: 60415

Hey Gang!

Remember the (now-obsolete) 100 KHz Calibrator? It usually had a 200 KHz oscillator followed by a Flip-Flop to divide-by-2, and produced harmonics every 100 KHz up into the low VHF range. An engineer friend of mine queried me about this, and I didn't have the foggiest notion how to answer:

If the square wave is made up of the fundamental and a series of diminidshing *** ODD *** harmonics, how come the calibrator works on ALL harmonics?

puzzled,
monty N5FC

4111. NNJ BARA hamfest Saturday June 3rd

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: bpn518@aol.com
Message-ID: <20000523233905.19731.00000955@ng-cp1.aol.com>
Source record: 60416

The Bergen Amateur Radio Assn (BARA) is holding is
Spring Hamfest Saturday June 3rd, at the
Fairleigh Dickenson University parking lot, located
just 10 minutes from the George Washington Bridge
in Teaneck, NJ.

See information on the BARA website at
www.bara.org

Buyers, arrive at 8am, $5 entry fee.
Harmonics free, as well as XYL's.

Sellers begin to arrive at 6am., $10 per space.
Limited AC Power spaces priced at $20.

VE sessions
Ham flea market
refreshments available.

One of the largest hamfests in the tri-state area.

Hope to see you there...

4112. Re: How cheaply can I build/buy it? Attn TOm

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Jean-Fran&#65533;ois FOURCADIER <jf.fourcadier@wanadoo.fr_NOSPAM>
Message-ID: <8gfqhu$l91$1@wanadoo.fr>
Source record: 60417
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Sure !

Look at :

http://hem.passagen.se/sm0vpo/use/cavity.htm

--

73 de F4DAY

Jean-Fran&#65533;ois FOURCADIER

General Mark Morgan <one.big.asshole@ahole.com> a &#65533;crit dans le message : 392316A6.1D86502C@ahole.com...
You're such a dork.....

Tom Bruhns wrote:
>
> Bob wrote:
> >
> > The simplest receiver is a diode detector. Originally known as a
crystal
> > set. Requires no batteries or transistors or tubes. Only receives AM.
>
> Oh, a challenge! I'll bet I can receive FM on one... Of course, I DO
> need to add some tuned circuits, or at least one tuned circuit. But
> for sure there's no reason I couldn't build a ratio detector with just
> diodes and tuned circuits, tuned directly to an FM station. And slope
> detection is even simpler. Stereo might be a bit tough, though. ;-)
>
> Cheers,
> Tom

4113. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <392B9CB7.8A50BAB9@dialpoint.net>
Source record: 60418

As was pointed out the very old ones used the 100 khz crystal and did not use a devider. The newer ones did and then some were operated around 1 mhz and used a series of flip-flops to generate markers every 25 khz or so. Probably when the square wave hit the first tuned circuit (even stray inductance and capacitor) it rounded off the square wave and generated the even harmonics.

maddog@io.com wrote:
>
> Hey Gang!
>
> Remember the (now-obsolete) 100 KHz Calibrator? It usually had a 200
> KHz oscillator followed by a Flip-Flop to divide-by-2, and produced
> harmonics every 100 KHz up into the low VHF range. An engineer friend
> of mine queried me about this, and I didn't have the foggiest notion
> how to answer:
>
> If the square wave is made up of the fundamental and a series of
> diminidshing *** ODD *** harmonics, how come the calibrator works on
> ALL harmonics?
>
> puzzled,
> monty N5FC

4114. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <gSOW4.12208$yi.58742@news02>
Source record: 60419
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

Curtis,

Assuming it is an AT cut crystal and running at typical HF band
frequencies the crystal probably has:

Q > 50,000 , might be > 500,000
Resistance < 60 ohms, might be < 10 ohms
Temperature stability 0 to 50C < +/- 100 Hz at 10 MHz, might be < +/-
20 Hz
Time stability < < 0.1 Hz per day at 10 MHz

The crystal is commonly modeled as a series tuned circuit with an
additional capacitor across the whole thing. For a bunch of odd
reasons this can look like a parallel tuned circuit at some
frequencies.

Your best bet is to build a VFO with the range you are looking for and
feed it's output into the crystal socket on the radio. That way you
can optimize the VFO and you don't mess up the radio. About all it
will cost you is another transistor and about 3 ma or so of current.

Hope this helps

Bob Camp
KB8TQ

"Curtis Scholl" <cscholl@izzy.net> wrote in message
news:392B26BC.6B7457A2@izzy.net...
> Hi Group:
>
> I have a number of schematic diagrams with crystals in one
frequency
> or Variable with loading. How does on create an equivalent circuit
with
> the same characteristics of a crystal? what is involved?
> 1. I would assume a resistance of the crystal itself
> 2. I would assume an equivalent "loading" to match the capacitance
of
> the crystal
> 3. Maybe Q is important?
>
> I would, given my understanding, that the crystal has a high
internal
> resistance? One cannot just replace the crystal with a tuned series
or

> parallel LC combination.
> Am I rehashing an old subject?
>
> Curtis Scholl
> cscholl@izzy.net

4115. Society of Amateur Radio Programmers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: David Johnson <kb5ylg@yahoo.com>
Message-ID: <392bc3a2_2@news1.prserv.net>
Source record: 60420

Now forming

http://www.geocities.com/kb5ylg

4116. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ggfi2hic1@neptunium.btinternet.com>
Source record: 60421
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Curtis,

In a nutshell -

BIASING CLASS-A JUNCTION TRANSISTORS

Class-A means the collector current is never cut off during the signal input voltage swings such as in a microphone amplifier. All the rest is a simple application of Ohm's Law.

There are two characteristics of the transistor of importance -

Vbe is the emitter-base voltage needed to turn on the transistor collector current. For silicon transistors it is 0.65 volts. For germainium transistors it is 0.15 volts.

Beta is the current gain Ic / Ib, the DC collector current divided by the DC base current. The value of Beta is obtained from the data sheet. For small-signal types at audio frequencies it is usually between 50 and 300. The exact value doesn't matter. If you don't know have a guess at 100. This allows some calculation so be done in the head.

Obviously, DC emitter current = collector current plus base current. But current gain is so high, for many purposes the collector and emitter currents can be considered to be equal.

For small signal amplifiers think in terms of milliamps, k-ohms and volts. Base currents are in microamps.

The most general circuit is a transistor plus 5 resistors. Get yourself familiar with the standard values in the +/- 5% tolerance range. Resistor values increase in 10% steps. There's also a DC supply Vdc.

Draw the circuit :-

R1, R2 and R3 are all in series across the supply Vdc with R1 connected to Vdc.

The junction of R2 and R3 is connected to the transistor base.

R4 is the collector load resistor between the junction of R1 and R2 and the collector. It need not be a resistor. It could be the primary winding of a transformer, or a tuned circuit with negligible DC resistance.

R5 is the resistor between emitter and the grounded side of Vdc.

For good stability versus temperature and time there are two things to remember -

(1) There must be DC negative feedback from the collector or emitter circuit to the base. R1 and R5 provide this feedback. If this most general circuit is simplified either R1 or R5 may be removed. But NEVER remove both. Negative feedback also ensures that differences in Beta between one transistor and another have little effect on circuit operation.

(2) The bleed current through R2 and R3 must be considerably greater than the base current. As a rule of thumb it should be 5 or ten times greater. I like 10. This ensures that changes in base current due to changes in Vbe due to temperature, do not signicantly change the voltage across R3. If the volts across R3 are stable then all other circuit voltages and currents will be stable.

Begin by choosing values for the collector current and bleed current through R2 and R3. Don't choose a much greater collector current than necessary to supply the signal current to the next stage. Especially if the equipment is battery operated. The base and emitter currents can then be calculated.

The total current from the supply is the collector current plus the bleed current through R2. This is also equal to the emitter current plus the current through R3. It may seem obvious but it is always advisable to check.

Then allocate voltages to the junction of R1 and R2, and to the emitter. The peak signal voltage expected at the collector must be taken into account. The collector signal voltage must not be allowed to swing within about 0.5 volts of the base voltage or signal distortion will occur.

The emitter to ground voltage should be 2 or 3 times greater than Vbe. This swamps changes in Vbe due to temperature or to variation between one transistor and another..

The voltage across R3 is then emitter volts plus Vbe.

The currents in all resistors and the voltages at all circuit nodes have now been estimated and the resistor values can be calculated. Select the nearest resistor values from the 5% tolerance range. Check that R2 and R3 are not so low in value as to divert the incoming signal current away from the transistor base.

The base signal input resistance is 25 * Beta / Ie ohms where Ic is emitter current in milliamps.

Being obliged to select from preferred resistor values will slightly upset the originally selected DC circuit voltages and currents. So now recalculate everything starting this time with known resistor values. It might be necessary to make judicious changes in one or two resistor values or voltages. But it's a very uncritical matter. The DC

feedback makes for an easy life.

The most sensitive part of the circuit is the ratio of R2 to R3 which determines the voltage across R5 and hence also the collector current. (The circuit at DC is an emitter follower).

If R1 is not zero then the junction of R1 and R2 is normally decoupled to ground via a large value capacitor.

R4 can be set to zero and R1 can become the collector load.

R5 can be decoupled to ground or part of it can be left un-decoupled to provide negative at signal frequency. This also greatly increases base input impedance of the ampkifier. Zin = Beta*R5.

The output signal can be taken from the emitter. The circuit is then known as an emitter-follower. High input Z and low output Z.

The most simple circuit has all resistors removed except R1 and R2. This is suitable when the collector DC voltage is not of great importance such as very small signal amplifiers.

Incidentally, the voltage gain for silicon at LF in the above circuit is always 40 times the DC volts-drop across the collector load resistance. Not everybody knows that.

With a little practice and a pocket calculator you will be able to design circuits in a couple of minutes. Its great fun especially when a circuit is put together and the measured DC voltages are all in their predicted ball parks.
--
Reg. G4FGQ
==========
Free radio design software from -
http://www.btinternet.com/~g4fgq.regp
==========
Curtis Scholl <cscholl@izzy.net> wrote in message news:mgAW4.154$xJ2.3091@news.itd.umich.edu...
> Reg-
> Your suggestion is a good one. The elementary part would have to include
> more than a paragraph of explanation of why/how.
>
> Bias is what I am concerned with mostly. The reason to bias is simple, it
> needs some current in the base to turn it on. I want to know how to
> determine how much and the effect on the other end. Also what current is
> essential and what current is not. I have a very basic circuit, collector
> feedback bias, common emitter, with a 330 resistor in parallel with the
> collector/base junction and a 1K resistor above that. The !K

resistor is in
> series from the battery to the juntion of the collector and bse
bias
> resistor.
>
> There is no emitter resistor.
>
> the kind of things I want to determine are the idle current, base
> current, emitter current, DC inout resistance, DC Output resistance,
AC
> input impedance, AC output impedance, methods of coupling stages,
how much
> feedback is enough to oscillate a stage, how much input impedance is
good
> for buffer amplifiers and such.
> I want to be able to determine the biasing and coupling using
Voltage
> Divider, self bias etc.
>
> Tall order?
>
> Curtis Scholl
> cscholl@izzy.net
>
> Reg Edwards wrote in message
<8ge5al$ha9$1@neptunium.btinternet.com>...
> >May I suggest a book of elementary transistor theory which will
> >includes the principles of transistor biassing. Nearly all
components
> >in a transistor amplifier are there just for bias and decoupling.
Its
> >a relatively simple subject. You would then be able to draw your
own
> >circuits with component values. Much more satisfying.
> >--
> >Regards, Reg.
>
>
>

4117. Any QRP'rs in the Mobile Alabama Area

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8ggs9b$f33$1@nnrp1.deja.com>
Source record: 60422

Anyone in the Mobile Alabama area that wants to do some local QRP'ing?? I've got at Pixie II that I want to try out with some Near Vertical Incidence Signal (NVIS) propagation. The signal is much too underpowered for night time operation with the QRN so terrible. We could try during the day when the QRM is down.

Thanks!
Bill
KD4PWB

Sent via Deja.com http://www.deja.com/
Before you buy.

4118. Re: Needed..HomeBrew DTMF Microphone

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8ggsb7$f3s$1@nnrp1.deja.com>
Source record: 60423

Thanks!!!

Excellent suggestion.

Bill

In article <sim5liqgo1131@corp.supernews.com>,
"john graesser" <graesser@tca.net> wrote:
>
> <fretman_2@my-deja.com> wrote in message news:8gean2$lr4
$1@nnrp1.deja.com...
> > I have a non-dtmf VHF radio. Does anyone have a suitable schematic
to
> > build a DTMF microphone (or DTMF pad) so I can access the local
phone
> > patch?
> >
> > Thanks!
> >
> > Bill
> > KD4PWB
> >
> After looking at what the parts cost, I went to radio shack and
bought a
> phone dialer. One of those little calculator size gizmos with a
speaker on
> the back. If I hold it against the mic, it will pass dtmf well enough
to use
> the local repeaters with either my icom 706mkiig or my htx200.
> thanks, John.
> kc5dwd
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

4119. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Curtis Scholl <cscholl@izzy.net>
Message-ID: <cgQW4.293$xJ2.4795@news.itd.umich.edu>
Source record: 60424
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Hi :

I am in one of those "touchy feely" areas of the country where technical thinking is not considered good form. The popularity of books of a technical nature are less important than those of the "politically correct" variety. Rocketry is not even represented except as a model rocket venue. Amateur Radio is represented only by the ARRL Handbook. While the ARRL books are good, they don't through my thick skull.

See ya!

Curtis Scholl

jyazel@asacomp.com wrote in message <392aef79.11007488@news.asacomp.com>...
>On Tue, 23 May 2000 07:51:05 -0400, "Curtis Scholl" <cscholl@izzy.net>
wrote:
>
>>To Whom it may concern:
>>
>> I seek a book on electronics/transistors with a concentration on
biasing
>>transistors (bipolar/mosfet/jfet etc) that doesn't leave one hanging.
>> ----------- SNIP ---------
>
> Have you tried your library?
>
>

4120. Re: 26 VDC from 13 VDC voltage doubler cct (abt 7 amps or so) Any Help??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <392BF9E5.A82953D6@home.com>
Source record: 60425

The Nat Semi "Power Devices" handbook has a number of boost designs - or search their website for "boost regulator". There are older and available devices which can be pressed into service - like the LM3524 or LM3525 as pulse width modulators - for this application.

earlve3ab@igs.net wrote:

> I have all the parts (and some extras) to build a few FET RF
> Amplifiers using the IRF 511/530 or similar series. Recent QST
> article has a good design that gives gain right up into the 10 mtr
> region..before the designs would peter out above 10 MHZ.
> Anyways..I'm going to build one..and If im going to use it MOBILE..
> Ill need to get the voltage supply up to at least 20 volts ..26 would
> be better. Anyone got a good cct for a voltage doubler or some
> kind of charge pump that is not too complicated. The regulation
> would not have to be that great for my use..73 Earl VE3AB

4121. 4cx800a mp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: w4th@webtv.net
Message-ID: <20343-392BD2E7-21@storefull-108.iap.bryant.webtv.net>
Source record: 60426

I am selling a matched pair of 4cx800a tubes. These tubes have never
been used. They are Svetlana tubes. You can bid on these tubes at ebay
the link is below.
73
Tom
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=339028545

4122. Re: interfacing two transceivers to allow "dual receiver"

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8ggsc0$neh@unix2.cc.ksu.edu>
Source record: 60427

"Anthony Roskilly" <Morse.Key@btinternet.com> writes:

>Having had to sell my much loved FT1000D to raise cash I was wondering if
>anyone out there in cyberspace had successfully interfaced two transceivers
>or transceiver and receiver effectively to imulate the dual receiver
>facilities of the top of the range rigs?

>I assume there is more to this than simply taking an additional coax off the
>receiver side of of the tx/rx changeover relay....

Many years ago (1975?) I owned a TenTec Triton IV (aka Model 540).
Then I was lucky enough to stumble onto and buy an external VFO for it.

Using BOTH the internal and external VFO's at the same time gave beautiful
"dual-frequency" reception--I loved it! (Later it was "creamed" beyond
repair in a car accident!)

Maybe you could purchase a manual (mine came with schematics) for the
540/Triton IV and the external VFO by calling TenTec?

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4123. FS: Mobile tube/high voltage power supplies for txer's or amps

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Jon <toomuchstuff@pobox.com>
Message-ID: <J8UW4.28395$T41.689903@newsread1.prod.itd.earthlink.net>
Source record: 60428
Cross-posted to:
alt.ham-radio.marketplace,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

One Swan 412 mobile transceiver power supply for unknown model Swan setup.
One homebrew but very nice, heavy duty toroidal multi-output power supply
for transmitter or tube amplifier. Detailed specs and photos at
www.hightechspecialties.com . Respond via toomuchstuff@pobox.com . thx

4124. Re: Linux filter software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <392C1DBA.3B0F71C6@clifto.com>
Source record: 60429

Tom Bruhns wrote:
> What kind of filters and what kind of design? I believe you can get
> SciLab (for free) for Linux, and it has some good tools for making
> digital (discrete-time) filters and for finding pole and zero
> locations for continuous-time filters. I use it regularly for
> both...but that might not be at all what you're looking for.

SciLab is definitely not what I was expecting, but it looks interesting
enough that I'm going to get it and install it. It may well do the job.

I'm mainly interested in keeping something around for those quickies.
Right now I'm playing around with some all-pass (phase-delay) ideas,
but from time to time I cobble together all sorts of short-term solutions
to test situations and crazy ideas that increase my understanding of
what the books have told me.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4125. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <A_UW4.16$q5.247@news.inreach.com>
Source record: 60430

Curtis:

Some crystal oscillators can be converted to variable frequency oscillators (VFO) simply by substituting a parallel resonant circuit made up of a coil and capacitor. However, that is not true for all crystal oscillators, so you can't assume it will work for yours. If you want to convert a crystal osc to a VFO, you should first determine what type of oscillator you have to begin with, such a Colpitts, Hartley, Pierce, etc...then look for a schematic of a VFO of the same type. That way you won't be changing things too drastically and you will have the highest chance of success.

By the way, many crystal oscillators can be varied over several kHz by putting a variable capacitor in series with the crystal....these are VXO's (variable crystal oscillators). Over a resonable tuning range, they maintain the stability of the crystal.

Stability is something not easily attained with VFO's, especially if you are converting a crystal osc that was designed with the thought that the crystal would keep the osc on freq. When you convert it to a VFO, the stability of the crystal is lost and you will end up having to find the right combination of temperature compensating capacitors to keep it from drifting around.

Instability is a nuisance on receive and can be illegal on transmit.

Roger K6XQ

4126. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8gh6ni$42g2@icet.net.nih.gov>
Source record: 60431

maddog@io.com wrote:
: Hey Gang!
:
: Remember the (now-obsolete) 100 KHz Calibrator? It usually had a 200
: KHz oscillator followed by a Flip-Flop to divide-by-2, and produced
: harmonics every 100 KHz up into the low VHF range. An engineer friend
: of mine queried me about this, and I didn't have the foggiest notion
: how to answer:
:
: If the square wave is made up of the fundamental and a series of
: diminidshing *** ODD *** harmonics, how come the calibrator works on
: ALL harmonics?

I recently investigated this issue for a receiving converter. Thanks to
help from Ravi Goonasekeram (KA3NNJ), I learned that any mismatch between
the oscillator and its load, that is, any complex impedence that the
square wave travels through, distorts the oscillator signal sufficiently
to include even harmonics. You can think of it as an effect of
smothing the sharp edges of the "perfect" square wave.

-- Andy (WA3LTJ)

:
: puzzled,
: monty N5FC
:

--

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov

4127. HP 5255A pinout ?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Frederic RIBLE F1OAT <frible@teaser.fr>
Message-ID: <392C21AA.6A36E03D@teaser.fr>
Source record: 60432
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew

I am back from Dayton with a beautiful HP 5255A plug-in.
I hope I can use it in front of my valorous Tek 7L12
spectrum analyzer to see the 10 GHz band !

I am looking for the pinout of the Centronics like
connector before trying anything.

This plug-in seems done for a 5245L/M or 5247L/M or 5248
analyzer.

Thank you for any relevant URL or diagram.

--
Frederic RIBLE - F1OAT mailto:frible@teaser.fr
Nozay - France (91) http://www.teaser.fr/~frible

4128. RE: IC 402 batteries

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Juan <novalid@novalid.com>
Message-ID: <8gh8c3$p7i$1@diana.bcn.ttd.net>
Source record: 60433

For my IC202 (The same but for 2 meter) I am using 10 standard NiMH KR6 size batteries adapted into the rig.
A KR6 NiMH battery has about 1200 mA/hour capacity.

Best regards,

Juan Miguel, EA6NP

Harke Smits <harke.smits@net.hcc.nl> escribi&#65533; en el mensaje de noticias 392AC32B.71BC052@net.hcc.nl...
> Does anyone know a source for IC 402 NiCad batteries? Used to be Sanyo
> N-900C types but I think no longer available.
> 73 de Harke PA0HRK
>
>

4129. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <392C26A3.5BF2C7E2@clifto.com>
Source record: 60434

jyazel@asacomp.com wrote:
> Have you tried your library?

Not everyone has a decent library in reasonable reach. Even the few good libraries in my area have little in the 621 section, and most of that is really really old, and I already know how to tap my 6AQ5 to see if it's microphonic, thankyewverymuch.

Now, my library can get *some* of the books that I request through the interlibrary loan system. But first I'd need a title. So I'd come to a Usenet discussion group and ask for suggestions. You know, just like the original poster did.

Consider yourself fortunate that the libraries in your area don't spend their entire budgets on romance paperbacks, video tapes and rap CDs.

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+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+
```

4130. FS: Tektronix 7603 plus plug-ins, probes and cart

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Michael Melland <badger@vbe.com>
Message-ID: <392C57EA.997FAC2A@vbe.com>
Source record: 60435
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.swap

I just purchased a new O'scope and it's time to pass along my loved and venerable Tektronix 7603 100 MHz frame and plug-ins. The scope is

in working condition, a few scratches on the case but overall in good shape.

7603 frame (wi/readout... this is a Holland made Tek)
7B53A time base plug-in
2 ea 7A26 dual 200 MHz vertical amp plug-ins
Original manuals
2 ea new Avex X10 100 MHz probes
Extra 7603 frame for parts
Model 3 or was it 5 Tek (?) lab cart with drawer and scope lock. Can hold scope on top tilting base, other instruments like a TM504 on second shelf and has a large drawer on bottom..... wheeled.

Asking $375 for all..... u-haul. Near Oshkosh, Wisconsin. Scope has not been calibrated.... but then who needs that <grin>. If interested

e-mail me off list. I'd rather pick-up but you pay shipping if you want it shipped.

Thanks, es 73 de Mike Melland, W9WIS

4131. Re: Amidon---Poor Customer Service Notice

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: A Jury <gdbear1@juno.com>
Message-ID: <392C3D86.6100F7C2@juno.com>
Source record: 60436

Actually I have ordered from them several times. The only problem was
the latest one and that was the Post office messing up. Acording to the
post mark it took 2weeks to travel less than 100miles. Amadon shipped
me a duplicate order after 3 days and just had me return the original
when it showed up, no charge to me. Im pretty happy with them, maybe
you just got unlucky.

Art KF7GD

Will wrote:
>
> What in hell is going on with Amidon???? I already made nearly 20
> telephone calls this past week to find out about my overdue order and
> nobody know from S**T about what is going on---from the receptionist
> on.
>
> Based upon my experiences the past month I GIVE AMIDON MY LOWEST
> CONSUMER SATISFACTION RATING!!! I advise anyone who intends to do
> business with Amidon to seek another supplier and to avoid dealing with
> them direct.
>
> This company, as represented by their employees, is truly second rate
> and nowhere near the Amidon I dealt with in the past. WHAT A KOOK
> OPERATION! Everyone I've talked to has trouble speaking on the
> telephone and English is NOT their native language.
>
> Consumer beware...

4132. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8ghfptkff1@uranium.btinternet.com>
Source record: 60437
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

Curtis, I know exactly what you mean. If you can't understand the
ARRL high-tech bible then just do as I say. The disciples, the old
wives', don't even understand their own tales.

Its all so simple really. See you again.
--
Regards, Reg.
==========
Have you visited my Website at: : -
http://www.btinternet.com/~g4fgq.regp
==========
Curtis Scholl <cscholl@izzy.net> wrote in message
news:cgQW4.293$xJ2.4795@news.itd.umich.edu...
> Hi :
>
> I am in one of those "touchy feely" areas of the country where
technical
> thinking is not considered good form. The popularity of books of a
technical
> nature are less important than those of the "politically correct"
variety.
> Rocketry is not even represented except as a model rocket venue.
Amateur
> Radio is represented only by the ARRL Handbook. While the ARRL books
are
> good, they don't through my thick skull.
>
> See ya!
>
> Curtis Scholl
>
>
> jyazel@asacomp.com wrote in message
<392aef79.11007488@news.asacomp.com>...
> >On Tue, 23 May 2000 07:51:05 -0400, "Curtis Scholl"
<cscholl@izzy.net>
> wrote:
> >
> >>To Whom it may concern:
> >>
> >> I seek a book on electronics/transistors with a concentration
on
> biasing

> >>transistors (bipolar/mosfet/jfet etc) that doesn't leave one
hanging.
> >> ----------- SNIP ---------
> >
> > Have you tried your library?
> >
> >
>
>

4133. Re: Ideas for a Homebrew Shortwave Receiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: LA8AK@online.no
Message-ID: <392af3bf.780344559@news.online.no>
Source record: 60438

On Sun, 21 May 2000 19:29:14 +0100, "Reg Edwards"
<G4fgq.Regp@btinternet.com> wrote:

>With a 136 KHz tuned antenna and a Q of 100, the bandwidth is 1.36 KHz
>to the 3 dB points. It is too narrow for AM and SSB. OK for slow
>morse.
>
not sure what you mean by 'slow morse' as 100LPM (20WPM) requires 17Hz
bandwidth to pass.

My receiver is LwEa which may be compared to BC453, used 800Hz IF
bandwidth and DSP-9 set for 100/200Hz, the worst problem was tuning
accuracy - the 60 year old boatanchor isn't made for such demands, the
lack of selectivity is compensated using DSP-9 in the audio
(loadspeaker) circuit - I do not call it receiver selectivity, would
say that 500Hz IF bandwidth is more normal for a receiver

73
jan-martin
LA8AK

4134. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392C4696.5D98F680@agilent.com>
Source record: 60439

Well, if I was specifically trying to generate all harmonics, I'd generate an impulse once per cycle. You can come close to that with some simple circuits such as a NAND gate with one input fed directly from the 100kHz square wave, and the other from a slightly-delayed version: just an RC delay, or in fact, just an R in series, relying on the gate input capacitance and stray capacitance to generate the delay. For example, if you generate a 5 nanosecond wide pulse once every 10000 nanoseconds (100kHz repition rate), you'll spectral lines every 100kHz, and their amplitude will be "flat" within about 0.3dB out to 30MHz (if I did the math right!), and about a 5 millivolt amplitude each assuming 5 volt CMOS logic. Narrower pulses extend the useable bandwidth and lower the amplitude per frequency. You should be able to get very useable harmonics out through 440MHz with AC logic and narrow pulses. (You don't have to use narrow pulses, but the spectral "envelope" of harmonics is a sin(x)/x shape, which has nulls, and you'd want to avoid making the pulse width such that you had a null on the band of interest!)

There may still be some Agilent/HP ap notes on step recovery diodes on the Agilent web site. Those diodes are specifically used to generate impulses for generating microwave harmonics.

Cheers,
Tom

maddog@io.com wrote:
>
> Hey Gang!
>
> Remember the (now-obsolete) 100 KHz Calibrator? It usually had a 200
> KHz oscillator followed by a Flip-Flop to divide-by-2, and produced
> harmonics every 100 KHz up into the low VHF range. An engineer friend
> of mine queried me about this, and I didn't have the foggiest notion
> how to answer:
>
> If the square wave is made up of the fundamental and a series of
> diminidshing *** ODD *** harmonics, how come the calibrator works on
> ALL harmonics?
>
> puzzled,
> monty N5FC

4135. Re: Sam's Fotofacts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392C4709.B3490D04@agilent.com>
Source record: 60440

AltaVista sez: http://www.hwsams.com/tech_prod_div.html

Steve Robeson wrote:
>
> Does anyone have a URL for Sam's?
>
> Steve, K4YZ
>
> The nation that is ready to fight in peacetime is less likely to HAVE to fight
> in wartime......(Author unknown, but he probably wasn't a politician!)

4136. TS-930S help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: Anthony Roskilly <Morse.Key@btinternet.com>
Message-ID: <8ghlqj$7gj$1@neptunium.btinternet.com>
Source record: 60441

Hi, I have a "dead" TS930SAT and have been advised that the fault is likely to lie with some zener diodes and
their assoicated 2 watt resistors: R7 R8 R9 R10 D6 D7 D8. My problem? (how long have you got) but the problem
with the rig ! I can't locate the components in the rig!

The schematic shows the components near to the Digital Unit, but I've removed that and at the board beneath that
and at the main board underneath the rig, and at the power supply board beside the mains transformer, but I've
still not found the ******* things, the 2watt resistors should be very obvious.... can anyone out there help pls?

I really want to get this rig back on the air as it has all filters and the atu and works brilliantly on CW, I was hoping
to have it ready for WPX this weekend but I don't think thats going to happen.

73

--
Tony G 3 Z R J

--
Tony

4137. Old Semiconductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: "Wallace E. Steinbrecher" <wsteinbr@denalics.net>
Message-ID: <392CC113.CFED763D@denalics.net>
Source record: 60442

Can somebody please help me with specs or cross references for the
following GE parts?
GE-504A rectifier diode
GE-X1 SCR
Thanks in advance.

4138. Re: ...and miles to go before I sleep!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-24 00:00:00 UTC
From: mzenier@netcom.com
Message-ID: <8gjnd4$298$1@slb6.atl.mindspring.net>
Source record: 60443

In article <8gcgmm$g4s$1@newsg4.svr.pol.co.uk>,
L <john@clavin.freeserve.co.uk> wrote:
>OK, you guys, any ideas as to what the numerous Shortwave "Numbers" stations
>are? Is there a hidden code in the numbers themselves? Perhaps there is some
>kind of tone encoding. Maybe there is interaction between Numbers stations
>on seperate frequencies, and where abouts are they transmitting from? I
>thought the cold war was over..... Maybe there is a simple explanation to
>all this...

This is more of a question for rec.radio.shortwave, but the various articles in some of the SWL magazines (like Monitoring Times, www.grove.com or www.grove.net or something like that used to be their URL) concluded that they are the communications from the various intelligence agencies to their covert agents in the field. By keeping it simple, all the agent needs is a common shortwave radio and the one time pads giving the decryption keys. Having hidden codes would require more complex hardware which could be found and used as evidence. To prevent traffic analysis from revealing anything, the channels are kept busy with dummy traffic, so that changes in actual traffic indicating some new activity are masked.

Mark Zenier mzenier@eskimo.com mzenier@netcom.com Washington State resident

4139. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: maddog@io.com
Message-ID: <392c9eb8.90914092@news.io.com>
Source record: 60295

By the way, if you didn't know, the mathematical model for a square wave is a Fourier series of this form (I forget the constant):

i(t) = I?/pi [sin t + 1/3 sin 3t + 1/5 sin 5t + ...]

In words, a square wave is composed of an infinite series (sum) of sinusoidal components equal to the fundamental plus one-third of the third harmonic plus one-fifth of the fifth harmonic, and so on.

I'm pretty sure Fourier is right, so I know something else must be going on in the calibrator... anybody know?

73,
monty

4140. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Tom Turnbull <Tom.Turnbull@durham.ac.uk>
Message-ID: <8gj0r0$ev9$1@sirius.dur.ac.uk>
Source record: 60296
Cross-posted to: rec.radio.amateur,rec.radio.amateur.homebrew

You might try looking at Ian Purdies site at:

URL - http://www.integritynet.com.au/~purdic/

This has some very interesting pages on transistor bias and more.

Tom.

"Curtis Scholl" <cscholl@izzy.net> wrote in message
news:P9uW4.141$xJ2.1778@news.itd.umich.edu...
> To Whom it may concern:
>
> I seek a book on electronics/transistors with a concentration on
biasing

4141. Re: TS-930S help please

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: V Wilson <vwilson@jps.net>
Message-ID: <tkbX4.7971$NE3.433611@nntp1.onemain.com>
Source record: 60297

I have not worked on a TS930 for a long time. It appears that you have a unit with the serial number above 310XXXX. If you look for a three pin connector on the digital board labeled number 1 and follow that cable you should find these diodes mounted some where on the frame of the radio. I am not sure where the resistors are but I believe that your problem should be on the power supply board that has the large filter caps. The cable that I referenced goes to the signal board to connector number 29. Hope this little help is enough for you.

4142. Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Billy Young <youngbil@lcc.net>
Message-ID: <8gjm62$ed0@atlas.lcc.net>
Source record: 60298

I'm looking for a plans for about a 300 watt tube amp. Does any one have any ideas on where I can find it?

"73's"
Billy Young
KD5CSD
youngbil@txucom.net

4143. OT- book-OPAMP stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <392D5ED1.D38B7281@lafn.org>
Source record: 60299

Hi,

My appologies up front.
This is WAY off topic but I need input from some practical folks.

I am making several different op-amp circuits for my homebrew gear.
Some circuits use a mic preamp LF356 driving a NE5532 headphone amp,
dual 9v batteries, and drives two 32 ohm earphone elements (16 ohms).
Problem is the circuits oscillate/motorboat or mute at low frequency.
Bypassing the elecret mic seems very critical to avoid motorboating.

I sure can use your recommendations for text/software that helps
me understand how to estimate stabilty of the whole opamp circuit.
LIKE to use WINSPICE 3 if possible. Any newsgroups I should monitor?

Need pointer to "cookbook" and "software" such as
Schauman's Outline that includes practical examples of
how estimate stability and fix, including "BODE PLOTS"?

Thank you for any help and 73, W6MIK
--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

4144. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: k5dh@raytheon.com
Message-ID: <8ydX4.15$x75.2867@bos-service2.ext.raytheon.com>
Source record: 60300

In article <8gjm62$ed0@atlas.lcc.net>, youngbil@lcc.net says...
>
>I'm looking for a plans for about a 300 watt tube amp. Does any one have any
>ideas on where I can find it?
>
>"73's"
>Billy Young
>KD5CSD
>youngbil@txucom.net

Look back in the ARRL Radio Amateur's Handbook volumes from the
1960s through the early 1980s. I've seen several under-500 Watt
amp project in various Handbooks over the years. The hard part
about building an amp these days is the power transformer. New
ones cost a fortune. Have you considered buying a used amp such
as a Heath SB-200? They go for about $300.

73,
Dean, K5DH
Visit my amateur radio web site at http://www.qsl.net/k5dh

4145. Re: Old Semiconductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <392D6755.32EFF19A@clifto.com>
Source record: 60301

Wallace E. Steinbrecher wrote:
> Can somebody please help me with specs or cross references for the
> following GE parts?
> GE-504A rectifier diode
> GE-X1 SCR

I can't find either in my 1964 GE Transistor Manual.

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4146. what might happen....microwave tube...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8gjssb$sqe@unix1.cc.ksu.edu>
Source record: 60302

I've recently been the fortunate recipient of several discarded (but NOT necessarily defunct) microwave ovens, dismantling them for parts, especially two "neat" really-strong magnets per tube! I "stack" them on a wooden dowel/post and watch them "float" in the air:

```
+-+<-- dowel (about a foot high)
| |
===========
| |
| |
===========
| |
===========
| |
=========== Bottom magnet
WOODEN BASE
```

but my question concerns what might happen if I tried running one of the tubes (before removing the magnets, of course). All three ovens had schematics inside, so I'd have no problem re-connecting the appropriate wires. But I wonder just how the microwaves exit the tube? Do they pretty-much go in the direction the hole in the end of the tube (which is concentric with the holes through the magnegs) "points", or do they "spray" out in (almost) all directions like light emits from an ordinary incandescent lamp?

Lest anyone be concerned, I'm not particularly worried about the safty aspects--I (think I) have enounh brains to be elsewhere than the near vicinity of the tube if/when I try it, but none of the "fields and waves" courses I took (oh, so long ago) in college actually included any practical aspects of generating microwaves in them, and I'd like to try.

Maybe I can make an anti-roach gun to operate in my garage overnight, or, if the waves will be pointable, maybe I can make an anti-mouse gun and leave it pointed at a mousehole in my barn. (I've caught seven mice in an outbuilding in the last three nights, so I should have plenty of "experimental subjects"!)

I'll probably trot one of the tubs up to the local university and see if any of the professors up there have any idea, but I'm also open to suggestions from y'all.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448

NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4147. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8gjt3r$t6v@unix1.cc.ksu.edu>
Source record: 60303

>Not everyone has a decent library in reasonable reach. Even the few good
>libraries in my area have little in the 621 section, and most of that is
>really really old....
>Now, my library can get *some* of the books that I request through the
>interlibrary loan system. But first I'd need a title. So I'd come to a
>Usenet discussion group and ask for suggestions. You know, just like the
>original poster did.

Although my copy is dated 1971, I recommend John D. Lenk's "Handbook of
Simplified Solid-State Circuit Design", which provides rule-of-thunb
approximations for selecting solid-state and IC circuit values .... and
features a simple, practical treatment of circuit design.

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4148. Re: I nned a book on Transistor Circuit Design

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: mcalhoun@ksu.edu
Message-ID: <8gjt6r$90@unix1.cc.ksu.edu>
Source record: 60304

>Not everyone has a decent library in reasonable reach. Even the few good
>libraries in my area have little in the 621 section, and most of that is
>really really old....
>Now, my library can get *some* of the books that I request through the
>interlibrary loan system. But first I'd need a title....

Newer and more comprehensive (and MUCH more expensive) than Lenk's book
is Horowitz and Hill's "The Art of Electronics"!

--Myron.
--
Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

4149. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392D868E.7E1BAA6D@agilent.com>
Source record: 60305

Hmmmm....I think this explanation is a little misleading. Simply
putting a complex load on a linear square wave generator won't
generate any harmonics that aren't already there. I believe you MUST
have a nonlinearity somewhere to generate the harmonics. It may be
that a complex impedance load on the typical oscillator shifts its
operating conditions enough that even harmonics are generated, too,
but that's through a nonlinearity in the source, then. ANY
symmetrical waveform (that is, one in which the second half-cycle is
exactly the amplitude inverse of the first half-cycle) will have no
even harmonics.

The single impulse per cycle is very nice because the amplitude of all
the harmonics is nearly the same (out to where the pulse width of the
practical approximation to an impulse, that is a short pulse, starts
to become a significant fraction of a cycle of that harmonic).

Cheers,
Tom

Andrew R Mitz wrote:
>
> maddog@io.com wrote:
> : Hey Gang!
> :
> : Remember the (now-obsolete) 100 KHz Calibrator? It usually had a 200
> : KHz oscillator followed by a Flip-Flop to divide-by-2, and produced
> : harmonics every 100 KHz up into the low VHF range. An engineer friend
> : of mine queried me about this, and I didn't have the foggiest notion
> : how to answer:
> :
> : If the square wave is made up of the fundamental and a series of
> : diminidshing *** ODD *** harmonics, how come the calibrator works on
> : ALL harmonics?
>
> I recently investigated this issue for a receiving converter. Thanks to
> help from Ravi Goonasekeram (KA3NNJ), I learned that any mismatch between
> the oscillator and its load, that is, any complex impedence that the
> square wave travels through, distorts the oscillator signal sufficiently
> to include even harmonics. You can think of it as an effect of
> smothing the sharp edges of the "perfect" square wave.
>
> -- Andy (WA3LTJ)
>
> :
> : puzzled,

> : monty N5FC
> :
>
> --
>
> Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov

4150. Re: Old Semiconductors

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <392D84BE.42CA0F7F@valley.net>
Source record: 60306

"Wallace E. Steinbrecher" wrote:

> Can somebody please help me with specs or cross references for the
> following GE parts?
> GE-504A rectifier diode
> GE-X1 SCR

> Hello--

The GE-X1 was part of GE's "low cost" experimenter line of
semiconductors.
Chances are, you could substitute any similarly-packaged SCR with
a rating of 500V PIV or more and it would work acceptably. Power rating
generally
correllates with package dimensions.

Ditto the 504A rectifier-- a 1N4007 (1 ampere) or 1N5408 (3 ampere)
diode (both
rated for 1000V PIV) should work acceptably unless the 504A was a
fast-recovery
type. To discern whether it's fast recovery, check the circuit to see
whether it's
rectifying 60 or 120 Hz, or whether it's used in a switched-mode power
supply.

73,
Brad AA1IP

4151. TS850S

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: ts850user <marconiNOmaSPAM@maltanet.net.invalid>
Message-ID: <06b8d03d.cb1d5b11@usw-ex0109-068.remarq.com>
Source record: 60307

DO YOU ACCEPT THE NOISE LEVEL OF THIS RIG ??
mY RIG DOES NOT REQUIRE THE MOD MENTIONED BY kENWOOD.
WHEN I COMPARE THE NOISE LEVEL EVEN WITH A CR100, THE LEVEL
IS HIGH

* Sent from AltaVista http://www.altavista.com Where you can also find related Web Pages, Images, Audios, Videos, News, and Shopping. Smart is Beautiful

4152. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Mark Wunderman <markwunderman@sprintmail.com>
Message-ID: <392D9AD1.2A36C7BB@sprintmail.com>
Source record: 60308
Cross-posted to: rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipent,rec.radio.amateur.antenna

Chris,

I've been lucky getting fiberglass mast components from my local surfsail shop. The shop has had masts that were out of production that they have sold inexpensively. Also I once picked up about 15 8' sections of mast top halfs for a dollar a piece.

73

Mark KE6QCT

Christopher An wrote:

> Hi,
>
> Thank you for reading this posting. I am currently looking for sources
> for fiberglass mast. The length does not have to be long. The size I
> am looking for is about 5 feet long (or longer). Strength might be a
> concern because I am using it in high wind area. If you know any place
> that I can find those, I'd like to share it with you and will appreciate
> your help. I am also looking for 500~1000pF 2000V variable capacitor.
>
> Thanks for reading and 73,
>
> Christopher VE3UVT

4153. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Xnospam@oceanfree.net
Message-ID: <sfhX4.28160$sB3.10272@news.indigo.ie>
Source record: 60309

>I'm looking for a plans for about a 300 watt tube amp. Does any one have any
>ideas on where I can find it?
>
>"73's"
>Billy Young
>KD5CSD

http://www.qsl.net/ei9gq

73, Ed. EI9GQ.

--
Remove 'X' to reply.

EI9GQ homebrew radio page
http://www.qsl.net/ei9gq

4154. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <A4iX4.1420$%11.7763@news02>
Source record: 60310

It's pretty simple.

A 50/50 duty cycle square wave has no even harmonics. If the duty cycle is off from 50/50 even a tiny little bit then you start to get even harmonics. At a couple of percent (say 48/52 duty cycle) you have a second harmonic that's about 40 or 50 db below the fundamental component.

Logic gates and calibrator circuits are not infinite bandwidth devices so you will not get an infinite number of harmonics. They will only put out energy up to a certain point and that's it. The bandwidth limitation is what gives you a finite rise and fall time on the square wave out of a logic gate.

Bob
KB8TQ

<maddog@io.com> wrote in message news:392c9eb8.90914092@news.io.com...
> By the way, if you didn't know, the mathematical model for a square
> wave is a Fourier series of this form (I forget the constant):
>
> i(t) = I?/pi [sin t + 1/3 sin 3t + 1/5 sin 5t + ...]
>
> In words, a square wave is composed of an infinite series (sum) of
> sinusoidal components equal to the fundamental plus one-third of the
> third harmonic plus one-fifth of the fifth harmonic, and so on.
>
> I'm pretty sure Fourier is right, so I know something else must be
> going on in the calibrator... anybody know?
>
> 73,
> monty

4155. Re: what might happen....microwave tube...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <tbiX4.1459$%11.7943@news02>
Source record: 60311

If the magnetrons still work I would be VERY carefully experimenting
with them. Two basic safety problems:

1) You have pretty high voltages present. Normal high voltage safety
measures should be used.

2) Those magnetrons put out a LOT of power. Even if it bounces off
three or four things before it hits you there's still more than enough
there to blind you or worse, much worse...

I would strongly recommend some of the little 10GHz gunplexer type
units as stuff to experiment with rather than microwave oven
magnetrons. They put out a lot less power and do neater things.
Generally you can find a couple for $40 or less ....

Just an opinion ....

Bob Camp
KB8TQ

"Myron A Calhoun" <mcalhoun@ksu.edu> wrote in message
news:8gjssb$sqe@unix1.cc.ksu.edu...
> I've recently been the fortunate recipient of several discarded (but
NOT
> necessarily defunct) microwave ovens, dismantling them for parts,
> especially two "neat" really-strong magnets per tube! I "stack"
them on
> a wooden dowel/post and watch them "float" in the air:
>
> +-+<-- dowel (about a foot high)
> | |
> ===========
> | |
> | |
> ===========
> | |
> ===========
> | |
> ========== Bottom magnet
> WOODEN BASE
>
> but my question concerns what might happen if I tried running one of
the
> tubes (before removing the magnets, of course). All three ovens had
> schematics inside, so I'd have no problem re-connecting the
appropriate

> wires. But I wonder just how the microwaves exit the tube? Do they
> pretty-much go in the direction the hole in the end of the tube
(which
> is concentric with the holes through the magnegs) "points", or do
they
> "spray" out in (almost) all directions like light emits from an
ordinary
> incandescent lamp?
>
> Lest anyone be concerned, I'm not particularly worried about the
safty
> aspects--I (think I) have enounh brains to be elsewhere than the
near
> vicinity of the tube if/when I try it, but none of the "fields and
waves"
> courses I took (oh, so long ago) in college actually included any
> practical aspects of generating microwaves in them, and I'd like to
try.
>
> Maybe I can make an anti-roach gun to operate in my garage
overnight,
> or, if the waves will be pointable, maybe I can make an anti-mouse
gun
> and leave it pointed at a mousehole in my barn. (I've caught seven
mice
> in an outbuilding in the last three nights, so I should have plenty
of
> "experimental subjects"!)
>
> I'll probably trot one of the tubs up to the local university and
see if
> any of the professors up there have any idea, but I'm also open to
> suggestions from y'all.
>
> --Myron.
> --
> Five boxes preserve our freedoms: soap, ballot, witness, jury, and
cartridge
> PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785)
539-4448
> NRA Life Member and Certified Instructor (Home Firearm Safety,
Rifle, Pistol)

4156. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: rob34 <rob34@infinet.com>
Message-ID: <392dc7bc$0$88605@news.voyager.net>
Source record: 60312

Go to www.svetlana.com look under technical bulletins. Rob WB8VWI
"Billy Young" <youngbil@lcc.net> wrote in message
news:8gjm62$ed0@atlas.lcc.net...
> I'm looking for a plans for about a 300 watt tube amp. Does any one have
any
> ideas on where I can find it?
>
> "73's"
> Billy Young
> KD5CSD
> youngbil@txucom.net
>
>
>

4157. Re: what might happen....microwave tube...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Ralph Mowery <rmowery@dialpoint.net>
Message-ID: <392DC2F3.B20DF6B@dialpoint.net>
Source record: 60313

There was an artical in 73 Magazine a few years ago if you can find it.
It tells how to set up and use the microwave parts for a transmitter.

Myron A Calhoun wrote:
>
> I've recently been the fortunate recipient of several discarded (but NOT
> necessarily defunct) microwave ovens, dismantling them for parts,
> especially two "neat" really-strong magnets per tube! I "stack" them on
> OODEN BASE
>
> but my question concerns what might happen if I tried running one of the
> tubes (before removing the magnets, of course). All three ovens had
> schematics inside, so I'd have no problem re-connecting the appropriate
> wires. But I wonder just how the microwaves exit the tube? Do they
> pretty-much go in the direction the hole in the end of the tube (which
> is concentric with the holes through the magnegs) "points", or do they
> "spray" out in (almost) all directions like light emits from an ordinary
> incandescent lamp?
>

4158. Re: Cabinet screws ??

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-25 00:00:00 UTC
From: Jim Jerzycke <kq6ea@pacbell.net>
Message-ID: <392C799E.EC3FE92E@pacbell.net>
Source record: 60444

Try going to a Hobby Shop that sells Radio-Controlled model cars. Kyosho sells a kit of hardware that has exactly what you want. If your local shops don't have it, try Tower Hobbies in Illinois. They literally have everything. www.towerhobbies.com
73, jim

4159. Mic Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: "John C. Ko" <n2fno@att.net>
Message-ID: <BxjX4.2232$t_4.112822@bgtnsc06-news.ops.worldnet.att.net>
Source record: 60314

Without spending ridiculous price for electroret condenser type mic for Icom rig, I would rather use studio type mic with compensation amplifier with bells and whistles (tone controls and compressions - if possible).

I have look through ARRL Handbook, but nothing useful can be found.

Is anybody out there can shed some lights on this ?

Many thanks in advance.

John / N2FNO

4160. Radio Mods Library

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Daniel Hicks <dahicks@email.com>
Message-ID: <h2mX4.2520$t_4.133298@bgtnsc06-news.ops.worldnet.att.net>
Source record: 60315

Check out the W8MMQ radio mods library
http://www.w8mmq.net/mods/

Also, visit the W8MMQ amateur radio web site
http://www.w8mmq.net/

4161. Tube Output Matching

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: maddog@io.com
Message-ID: <392ded7c.176627189@news.io.com>
Source record: 60316

I'm thinking of building a miniature QRP (3-5W) tube-based transmitter, using a 7551 in the final, at reduced voltage. Is there any reason I can't use a broadband (ferrite core) impedance transformation to 50 ohms, and follow that with a fixed 50-ohm-to-50-ohm low-pass PI filter (like is done in solid state finals)?

73,
monty N5FC

4162. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: maddog@io.com
Message-ID: <392def04.177019265@news.io.com>
Source record: 60317

On Thu, 25 May 2000 22:48:00 GMT, "Bob Camp" <bob@cq.nu> wrote:

>It's pretty simple.
>
>A 50/50 duty cycle square wave has no even harmonics. If the duty
>cycle is off from 50/50 even a tiny little bit then you start to get
>even harmonics. At a couple of percent (say 48/52 duty cycle) you have
>a second harmonic that's about 40 or 50 db below the fundamental
>component.

I'm sure you're right, Bob. Is it periodic duty cycle, or symmetry
about "ground" that generates even harmonics?

Can anybody out there offer the mathematics that supports this?

73,
monty N5FC

4163. Re: Tube Output Matching

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sis87igco116@corp.supernews.com>
Source record: 60318

In article <392ded7c.176627189@news.io.com>, maddog@io.com says...
>
>I'm thinking of building a miniature QRP (3-5W) tube-based
>transmitter, using a 7551 in the final, at reduced voltage. Is there
>any reason I can't use a broadband (ferrite core) impedance
>transformation to 50 ohms, and follow that with a fixed
>50-ohm-to-50-ohm low-pass PI filter (like is done in solid state
>finals)?
>
>73,
>monty N5FC
>
The only real practical limit to your idea is that with a simple
transformer type arrangement, the capacitance of the plate winding
is usually equivalent to just about a short circuit to ground. probably
100 ohms or less. That kills the hell out of a 3k ohm desired imp.

It works ok with transistors where the collector imp can be as low as
a tenth of an ohm or so.

4164. INVITATION TO 3 ANTENNA REFLECTORS(LISTS)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: fractenna@aol.com
Message-ID: <20000526092057.19076.00000163@ng-cs1.aol.com>
Source record: 60319

QST--

You are invited to join one or all of the following lists on onelist. All these reflectors are e-mail based, and moderated so that no spam, porn, off-topic, or personal-offensive posts are sent out. You will receive no off-list e-mails by subscribing: again; no spam.

These lists (with average recent subscriber sizes) are:

ANTENNAS@ONELIST.COM 200 members
CROSSFIELDANTENNA@ONELIST.COM 75 members
FRACTALANTENNA@ONELIST.COM 250 members

Please review the descriptions at

http://www.onelist.com

Please note the CFA list specifically deals with this antenna in an objectively critical fashion and no posts will be allowed that make grandiose claims without supporting data presented. To date, no data has been presented which requires the extraordinary claims made by some pundits: there is no evidence for better performance than any other small vertical antenna (and that performance is poor).

To subscribe to any list, either go through the process at onelist, or to skip the process just do:

---------- -subscribe@onelist.com

where the ---------- is the name of a given list (such as 'fractalantenna')

73,
Chip N1IR

4165. Re: what might happen....microwave tube...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: glass2@glass2.lexington.ibm.com
Message-ID: <8gltsatue1@ausnews.austin.ibm.com>
Source record: 60320

In <8gjssb$sqe@unix1.cc.ksu.edu>, mcalhoun@ksu.edu (Myron A Calhoun) writes:
>I've recently been the fortunate recipient of several discarded (but NOT
>necessarily defunct) microwave ovens, dismantling them for parts,
>especially two "neat" really-strong magnets per tube! I "stack" them on
>a wooden dowel/post and watch them "float" in the air:
>

Be a little careful while disassembling the ovens. I seem to recall an
article a while back that said that some microwave ovens used insulators
made from Beryllium Oxide. While BeO isn't hazardous in solid form,
if you attempt to machine it, you end up with powdered BeO, which is
very nasty in terms of health affects. Unfortunately, I don't remember
all of the details, but it might be worth doing some research.

```
> +-+<-- dowel (about a foot high)
> | |
> ===========
> | |
> | |
> ===========
> | |
> ===========
> | |
> ========== Bottom magnet
> WOODEN BASE
```

Cool!

>
>but my question concerns what might happen if I tried running one of the
>tubes (before removing the magnets, of course). All three ovens had
>schematics inside, so I'd have no problem re-connecting the appropriate
>wires. But I wonder just how the microwaves exit the tube? Do they
>pretty-much go in the direction the hole in the end of the tube (which
>is concentric with the holes through the magnegs) "points", or do they
>"spray" out in (almost) all directions like light emits from an ordinary
>incandescent lamp?
>

Well, all you have to do is to solve Maxwell's equations to
determine how the fields exit the tube. Unfortunately, this could
be very difficult.

You might be able to approximate the exit as a slot antenna. Or,
you might be able to approximate it as a terminated waveguide. My
guess (and, it's only a guess) is that the waves probably exit and

form several lobes, although predicting the direction and intensity
of the lobes would be difficult without some emprical measurements.

>Lest anyone be concerned, I'm not particularly worried about the safty
>aspects--I (think I) have enounh brains to be elsewhere than the near
>vicinity of the tube if/when I try it, but none of the "fields and waves"
>courses I took (oh, so long ago) in college actually included any
>practical aspects of generating microwaves in them, and I'd like to try.
>

I'm EXTREMELY worried about the safety aspects! Most microwave ovens
produce microwave power in the 1KW range. This is an EXTREME amount of
power at microwave frequencies. Most hams that use microwaves generate
them via gunnplexers. A typical gunnplexer will produce about 10 milliwatts
of power, and you still see safety warnings about not looking into the
waveguide end of these things! With the microwave tube, you're talking
about five orders of magnitude more power! For example, if you had a
1KW laser, which can cut steel plate like a hot knife going through
warm butter, you wouldn't dream of looking into the beam. A 1KW microwave
source is about the same as the 1KW laser. Basically, what I'm trying to
say is please treat the tubes with lots of respect.

>Maybe I can make an anti-roach gun to operate in my garage overnight,
>or, if the waves will be pointable, maybe I can make an anti-mouse gun
>and leave it pointed at a mousehole in my barn. (I've caught seven mice
>in an outbuilding in the last three nights, so I should have plenty of
>"experimental subjects"!)
>

I'm not sure I'd want to do this; at least, not while living in the same
state! Consider where those microwaves may go. What might they reflect
off of? Where will they end up? What if someone walks
into the garage without realizing what's going on? Exploding
eyeballs are no fun!

Plus, you're running a bit of a risk that the animal rights activists
may get upset for irradiating mice or roaches.

>I'll probably trot one of the tubs up to the local university and see if
>any of the professors up there have any idea, but I'm also open to
>suggestions from y'all.
>

What frequency do the tubes operate on? Are they near an amateur band?
Magnetrons typically can't have their frequency pulled too much, and
they're probably not tuned for an amateur band. But, just think what
a great moonbounce system you could set up if they could be. Or,
radar. What license would you need for the frequency involved? Are
there any interesting chemical or material science experiments they
could be used in?

>--Myron.
>--

>Five boxes preserve our freedoms: soap, ballot, witness, jury, and cartridge
>PhD EE (retired). "Barbershop" tenor. CDL(PTX). W0PBV. (785) 539-4448
>NRA Life Member and Certified Instructor (Home Firearm Safety, Rifle, Pistol)

Dave

P.S. Standard Disclaimer: I work for them, but I don't speak for them.

4166. Re: OT- book-OPAMP stability

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: af389@lafn.ORG
Message-ID: <392E9EC3.BA43C007@lafn.org>
Source record: 60321

Hi Folks,

Just a short note to thank all of you who replied with so many practical
helpful suggestions and test methods to pin point causes
of motorboating.

Looks like I have several remedies to reduce motorboating
including but no limited to:
Make better layout, improved ps and mic bias decoupling, run headphones
in series to decrease peak currents, and use fresh good quality 9v
batteries and more as I study mailnotes.

THANK YOU for help and 73 from W6MIK.

--
David Shalita (Dave)
af389@lafn.org
Van Nuys, CA

4167. Re: Mic Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: goldreged@aol.comJUNKBLOK
Message-ID: <20000526130830.26447.00000264@ng-fm1.aol.com>
Source record: 60322

<<Without spending ridiculous price for electroret condenser type mic for Icom rig, I would rather use studio type mic with compensation amplifier with bells and whistles (tone controls and compressions - if possible).>>

Look at some Music supply stores.
Ed G.
KB1DQX
(Please Remove "JUNKBLOK" to E-mail.
Unless it's a Flame.)

4168. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: fretman_2@my-deja.com
Message-ID: <8gmhic$jg8$1@nnrp1.deja.com>
Source record: 60323
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

I tried putting the output of my RF signal generator into the xtal
socket of my Pixie II....got nothing. Putting the VFO signal into the
xtal socket may work on some radio's but not mine.

Bill
KD4PWB

In article <gSOW4.12208$yi.58742@news02>,
"Bob Camp" <bob@cq.nu> wrote:
> Curtis,
>
> Assuming it is an AT cut crystal and running at typical HF band
> frequencies the crystal probably has:
>
> Q > 50,000 , might be > 500,000
> Resistance < 60 ohms, might be < 10 ohms
> Temperature stability 0 to 50C < +/- 100 Hz at 10 MHz, might be < +/-
> 20 Hz
> Time stability < < 0.1 Hz per day at 10 MHz
>
> The crystal is commonly modeled as a series tuned circuit with an
> additional capacitor across the whole thing. For a bunch of odd
> reasons this can look like a parallel tuned circuit at some
> frequencies.
>
> Your best bet is to build a VFO with the range you are looking for and
> feed it's output into the crystal socket on the radio. That way you
> can optimize the VFO and you don't mess up the radio. About all it
> will cost you is another transistor and about 3 ma or so of current.
>
> Hope this helps
>
> Bob Camp
> KB8TQ
>
> "Curtis Scholl" <cscholl@izzy.net> wrote in message
> news:392B26BC.6B7457A2@izzy.net...
> > Hi Group:
> >
> > I have a number of schematic diagrams with crystals in one
> frequency
> > or Variable with loading. How does on create an equivalent circuit
> with
> > the same characteristics of a crystal? what is involved?

> > 1. I would assume a resistance of the crystal itself
> > 2. I would assume an equivalent "loading" to match the capacitance
> of
> > the crystal
> > 3. Maybe Q is important?
> >
> > I would, given my understanding, that the crystal has a high
> internal
> > resistance? One cannot just replace the crystal with a tuned series
> or
> > parallel LC combination.
> > Am I rehashing an old subject?
> >
> > Curtis Scholl
> > cscholl@izzy.net
>
>

Sent via Deja.com http://www.deja.com/
Before you buy.

4169. Re: Tube Output Matching

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392EC2FD.2A2812A8@agilent.com>
Source record: 60324

Have a look for Jerry Sevick's "Transmission Line Transformers" book (http://www.noblepub.com/Nobleweb/Nobledetail.html#NP9) for lots of practical info on how broadband you can expect to make a transformer with fairly high ratio. I'm just guessing, but let's say you need a 4050 ohm plate load for the 7551; then to get to 50 ohms, you need a 9:1 turns ratio. That's fairly high! As the turns ratio goes up, the practical bandwidth goes down. You'll probably need to resonate the plate capacitance. You might be able to cover all of any one HF band without retuning, but I suspect you'll have trouble getting to even an octave bandwidth. See Sevick's book for details; as you read it, be sure to consider the actual value of plate load resistance you need to achieve and what therefore the optimum impedance for the line you wind on the core. 450 ohms? Ouch.

Cheers,
Tom

maddog@io.com wrote:
>
> I'm thinking of building a miniature QRP (3-5W) tube-based
> transmitter, using a 7551 in the final, at reduced voltage. Is there
> any reason I can't use a broadband (ferrite core) impedance
> transformation to 50 ohms, and follow that with a fixed
> 50-ohm-to-50-ohm low-pass PI filter (like is done in solid state
> finals)?
>
> 73,
> monty N5FC

4170. Homebrew Amp Builders...FA 8877 Plate contact assy @ 2.00

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: N6AX <n6axNOn6SPAM@pacbell.net.invalid>
Message-ID: <0036fee2.0d14ed3c@usw-ex0107-055.remarq.com>
Source record: 60325

Custom fabricated plate contact assy fits 8877 tubes.

Silver plated with silver-plated finger stock.

See description and photograph at:

http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=338759761

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

4171. Re: Calibrator Harmonics

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Tom Bruhns <tom_bruhns@agilent.com>
Message-ID: <392EBFF8.3749B2B6@agilent.com>
Source record: 60326

It's the duty cycle that determines the harmonic content. Easy way to
see this: if I subtracted just the right DC voltage from a signal
that wasn't symmetrical about ground, I'd have a signal that IS
symmetrical about ground. So the ground-symmetry part is simply the
DC value. Since the subtraction is a linear process, it doesn't
change the harmonic content at all.

Cheers,
Tom

maddog@io.com wrote:
>
> On Thu, 25 May 2000 22:48:00 GMT, "Bob Camp" <bob@cq.nu> wrote:
>
> >It's pretty simple.
> >
> >A 50/50 duty cycle square wave has no even harmonics. If the duty
> >cycle is off from 50/50 even a tiny little bit then you start to get
> >even harmonics. At a couple of percent (say 48/52 duty cycle) you have
> >a second harmonic that's about 40 or 50 db below the fundamental
> >component.
>
> I'm sure you're right, Bob. Is it periodic duty cycle, or symmetry
> about "ground" that generates even harmonics?
>
> Can anybody out there offer the mathematics that supports this?
>
> 73,
> monty N5FC

4172. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <392ECAFF.50BF@ixpres.com>
Source record: 60327

Dean,

Today there is no need to use 60 Hz magnetics in HV power supplies.
Much less expense and weight and much better regulation when you run a
100 KHz switcher. Why the manufacturers of amateur HF amps are still
using 60Hz heavy transformers, I don't know. Must be cheaper for them?
For example, see article in Feb 1991 QEX on a 2KW switcher.

73,
Don, W6JL

Dean Hemphill, K5DH wrote:
>
> In article <8gjm62$ed0@atlas.lcc.net>, youngbil@lcc.net says...
> >
> >I'm looking for a plans for about a 300 watt tube amp. Does any one have any
> >ideas on where I can find it?
> >
> >"73's"
> >Billy Young
> >KD5CSD
> >youngbil@txucom.net
>
> Look back in the ARRL Radio Amateur's Handbook volumes from the
> 1960s through the early 1980s. I've seen several under-500 Watt
> amp project in various Handbooks over the years. The hard part
> about building an amp these days is the power transformer. New
> ones cost a fortune. Have you considered buying a used amp such
> as a Heath SB-200? They go for about $300.
>
> 73,
> Dean, K5DH
> Visit my amateur radio web site at http://www.qsl.net/k5dh

--
ï¿½ï¿½à¡±ï¿½

4173. FS:Sams Photofact sets 1-1900+

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Steve Massey <N6TT@jps.net>
Message-ID: <EdCX4.11958$NE3.580433@nntp1.onemain.com>
Source record: 60328

Hi guys,

Today i came across a bunch of original Howard W. Sams & Co. "Photofact" -- 7 filing cabinets from set no. 1 - 1900+ or there abouts. I loaded up sets no. 1-585 which is all i could carry. I could piece meal them out on ebay I suppose or try to sell the lot. Is there any one intrested in them? Or give me some suggestions on unloading them.
They seem very complete with Cumulative index from sets No.1 starting from 6-1946.. Besides the radio service data folders sets 1-1900+ there are dozens of Photofact books and plenty of notebooks full of service data.
Thanks, Steve N6TT

4174. Re: Linux filter software?

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: marsgal42@hotmail.com
Message-ID: <8gmsul$s22$1@nnrp1.deja.com>
Source record: 60329

In article <392C1DBA.3B0F71C6@clifto.com>,
"Clifton T. Sharp Jr." <clifto@clifto.com> wrote:

> I'm mainly interested in keeping something around for those quickies.
> Right now I'm playing around with some all-pass (phase-delay) ideas,
> but from time to time I cobble together all sorts of short-term
solutions
> to test situations and crazy ideas that increase my understanding of
> what the books have told me.

Linux does have an RF bandpass filter design program based
on double-tuned circuits.

For the digital stuff I cobbled together a simple window-method
program for low/high/bandpass filters, implementing the
equations more-or-less verbatim from Ifeachor and Jervis. I
also have a quick and dirty C translation of a FORTRAN imple-
mentation of the Parks-McClellan algorithm for the fancy stuff
(it does Hilbert Transforms, differentiators, etc.). Ugly, but
it works. No, I don't remember where I got it.

Laura Halliday VA3LDH/7 "Que les nuages soient notre
Grid: CN89mg pied a terre..." - Hospital/Shafte

Sent via Deja.com http://www.deja.com/
Before you buy.

4175. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Joseph Legris <jalegris@xprint.ca>
Message-ID: <392EFEB6.F7AB5925@xprint.ca>
Source record: 60330
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

fretman_2@my-deja.com wrote:
>
> I tried putting the output of my RF signal generator into the xtal
> socket of my Pixie II....got nothing. Putting the VFO signal into the
> xtal socket may work on some radio's but not mine.
>
>

Your RF generator probably has a 50 ohm DC current path
right between its output terminals, one of which is
grounded. That's a little like trying to conduct a choir
with a chain saw. Most crystal oscillators are delicate,
high-impedance affairs - you must treat them gently. Try
coupling through a pair of small capacitors.

J.Legris
change the x to s to reply

4176. MD Hamfest - June 18th

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: windbrkr@erols.com
Message-ID: <MPG.1398e5f3ccdaa8d989741@news.erols.com>
Source record: 60331

The Frederick Amateur Radio Club (FARC) presents the annual
Father's Day Hamfest on Sunday, June 18, 2000
from 8:00am to 3:00pm, rain or shine.
(Access for tailgaters opens at 6:00am)

It's at the Frederick County Fairgrounds on East Patrick Street in
historic Frederick, Maryland. Easy access from I-70 and I-270,
plenty of parking.

Talk-in on the 147.060(+) MADRA repeater.

We'll have Radios, Electronics, Computers, Acres of Tailgating,
Indoor Commercial Vendors, VE Testing and more.

Good food and refreshments available.

On the web go to http://www.qsl.net/k3erm/ for more info and a map.

General admission is a $5.00 donation.
Tailgating spaces are $5.00 each + general admission
Indoor tables are $10.00 each before June 10th, $15.00 after.

One of the largest and most popular hamfests in the
Baltimore/Washington metro area. Don't miss it!

Questions? E-mail k3erm@qsl.net

Thanks & 73,
Bob K9CMR

4177. Re: what might happen....microwave tube...

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-26 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <3GIX4.128$q5.5292@news.inreach.com>
Source record: 60332

Myron:

Firing up a magnetron won't produce any interesting effects, and could produce some dangerous ones. Considering the risk to reward ratio, I wouldn't try it.

Most of the microwave ovens I've disassembled have a tube with a ceramic and metal probe about 3/4 of an inch long sticking out the bottom which fits down inside a sheet metal piece of waveguide when the tube is screwed to it. That is the radiating part of the tube. I have several here, waiting for the one in my oven to burn out.

I have also salvaged microwave ovens for the HV diodes and even used a fan from one to replace a 40 year old fan in a Johnson Thunderbolt. The plastic blade really moves a lot of air and is much quieter than the original.

The power transformers can also be used. Lots of good stuff in defunct microwave ovens.

Roger K6XQ

4178. FS: Old Radio/Electron Tube Books (5): 1929 - 1957

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: oldbooks78@aol.com
Message-ID: <20000526212622.14508.00000300@ng-fa1.aol.com>
Source record: 60333

I currently have for sale the following old radio/electron tube books. Prices include book rate postage (within the US). The books are:

"Elements of Radio Communication" by John Morecroft, published in 1929 by John Wiley and Sons. The 269 page hardbound book is in good condition. There are pencil marks and notes on many pages, as well as notes inside the front and rear covers, but everything is readable and secure. Nicely illustrated throughout, with several photos of old vintage equipment. There is also a small pad of unknown purpose stapled to the first blank end paper. Available for $14.

"Practical Radio Communication; Principles - Systems - Equipment - Operation Including Short-wave and Ultra-short-wave Radio" by Arthur Nilson and J.L. Hornug, published in 1935 by McGraw-Hill. The 758 page book has blue cloth over flexible board covers. In good+ condition. There are some passages underlined in pen in the first 10 pages of the book, otherwise very clean. Nicely illustrated throughout. Available for $15.

"Communication Engineering" by William Littell Everitt, published in 1937 by McGraw-Hill. The 727 page hardbound book is in about fine condition. There is a previous owners name inside the front cover, and a few minor pencil notes on the first blank end page, otherwise very clean. Dark green cloth covers with gold lettering on the spine in particularly nice condition. Available for $13.

"Electronic and Radio Enginering" by Frederick E. Terman, published in 1955. The thick, 1078 page hardbound book is in about very good condition. The pages are generally clean, with no page tears, but with underlines on a few pages, and a previous owners name inside the front cover that is marked out with black marker. Black cloth covers in nice condition, with a strong binding. Lots of good info in this text. Available for $13.

"CBS Electron Tubes and Semiconductors Technician's handbook" first edition, first printing, published in 1957 by CBS-HYTRON. Unnumbered pages, about an inch thick, card covers with a spiral binding. The book covers receiving tubes, picture tubes, crystal diode reference guide, germanium and silicon diodes, silicon power rectifiers, transistors, special purpose tubes, tube type numbering system, use of tube testers, and much more. In very good condition. Available for $15.

If interested in any of the above, please email to "Oldbooks78@aol.com" to reserve. Thanks, and best regards.

Dave

==========
For other old and interesting books, please visit our web site at:

http://www.angelfire.com/va/oldbooks

4179. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Bob Camp <bob@cq.nu>
Message-ID: <nlGX4.4376$%11.21240@news02>
Source record: 60334
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

A couple of things that can go wrong when feeding a VFO into a crystal socket:

1) Neither side of the crystal may be at ground. You may have to get a ground connection another way.

2) There is only a 50/50 chance the pin you pick first is the right one to drive.

3) The crystal pins may be D.C. hot. Grounding one or both may stop the whole thing from working at all. Best to DC block the signal going in.

Hope this helps.

Bob Camp
KB8TQ

<fretman_2@my-deja.com> wrote in message news:8gmhic$jg8$1@nnrp1.deja.com...
> I tried putting the output of my RF signal generator into the xtal
> socket of my Pixie II....got nothing. Putting the VFO signal into the
> xtal socket may work on some radio's but not mine.
>
> Bill
> KD4PWB
>
>
> In article <gSOW4.12208$yi.58742@news02>,
> "Bob Camp" <bob@cq.nu> wrote:
> > Curtis,
> >
> > Assuming it is an AT cut crystal and running at typical HF band
> > frequencies the crystal probably has:
> >
> > Q > 50,000 , might be > 500,000
> > Resistance < 60 ohms, might be < 10 ohms
> > Temperature stability 0 to 50C < +/- 100 Hz at 10 MHz, might be < +/-
> > 20 Hz
> > Time stability < < 0.1 Hz per day at 10 MHz
> >
> > The crystal is commonly modeled as a series tuned circuit with an
> > additional capacitor across the whole thing. For a bunch of odd

> > reasons this can look like a parallel tuned circuit at some
> > frequencies.
> >
> > Your best bet is to build a VFO with the range you are looking for
and
> > feed it's output into the crystal socket on the radio. That way
you
> > can optimize the VFO and you don't mess up the radio. About all it
> > will cost you is another transistor and about 3 ma or so of
current.
> >
> > Hope this helps
> >
> > Bob Camp
> > KB8TQ
> >
> > "Curtis Scholl" <cscholl@izzy.net> wrote in message
> > news:392B26BC.6B7457A2@izzy.net...
> > > Hi Group:
> > >
> > > I have a number of schematic diagrams with crystals in one
> > frequency
> > > or Variable with loading. How does on create an equivalent
circuit
> > with
> > > the same characteristics of a crystal? what is involved?
> > > 1. I would assume a resistance of the crystal itself
> > > 2. I would assume an equivalent "loading" to match the
capacitance
> > of
> > > the crystal
> > > 3. Maybe Q is important?
> > >
> > > I would, given my understanding, that the crystal has a high
> > internal
> > > resistance? One cannot just replace the crystal with a tuned
series
> > or
> > > parallel LC combination.
> > > Am I rehashing an old subject?
> > >
> > > Curtis Scholl
> > > cscholl@izzy.net
> >
> >
>
>
> Sent via Deja.com http://www.deja.com/
> Before you buy.

4180. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Richard Soulie <soulie@zipworld.com.au>
Message-ID: <392F79B8.48C85B12@zipworld.com.au>
Source record: 60335

I hope you're kidding

I presume you used the ARRL handbook to study for your exam plenty of desing for 400W amplifier in all of the ARRL handbook going back many years used a 4cx250 with about 2000 volts on the plate

Eamon Skelton wrote:

> >I'm looking for a plans for about a 300 watt tube amp. Does any one have any
> >ideas on where I can find it?
> >
> >"73's"
> >Billy Young
> >KD5CSD
>
> http://www.qsl.net/ei9gq
>
> 73, Ed. EI9GQ.
>
> --
> Remove 'X' to reply.
>
> EI9GQ homebrew radio page
> http://www.qsl.net/ei9gq

--
Richard Soulie (VK2ARS)
soulie@zipworld.com.au
35 Musgrave Crescent
Fairfield NSW 2165
Australia

4181. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8go3j9$2h4$1@neptunium.btinternet.com>
Source record: 60336

A 200-watt, 100KHz, switched power supply a few inches away from the
receiver input circuits makes a mess of the signal to noise ratio.
--
Reg.
==========
http://www.btinternet.com/~g4fgq.regp
==========
Don W6JL <W6JL@ixpres.com> wrote in message
news:392ECAFF.50BF@ixpres.com...
> Dean,
>
> Today there is no need to use 60 Hz magnetics in HV power
supplies.
> Much less expense and weight and much better regulation when you run
a
> 100 KHz switcher. Why the manufacturers of amateur HF amps are
still
> using 60Hz heavy transformers, I don't know. Must be cheaper for
them?
> For example, see article in Feb 1991 QEX on a 2KW switcher.
>
> 73,
> Don, W6JL
>
>
> Dean Hemphill, K5DH wrote:
> >
> > In article <8gjm62$ed0@atlas.lcc.net>, youngbil@lcc.net says...
> > >
> > >I'm looking for a plans for about a 300 watt tube amp. Does any
one have any
> > >ideas on where I can find it?
> > >
> > >"73's"
> > >Billy Young
> > >KD5CSD
> > >youngbil@txucom.net
> >
> > Look back in the ARRL Radio Amateur's Handbook volumes from the
> > 1960s through the early 1980s. I've seen several under-500 Watt
> > amp project in various Handbooks over the years. The hard part
> > about building an amp these days is the power transformer. New
> > ones cost a fortune. Have you considered buying a used amp such
> > as a Heath SB-200? They go for about $300.

> >
> > 73,
> > Dean, K5DH
> > Visit my amateur radio web site at http://www.qsl.net/k5dh
>
> --
> ï¿½ï¿½à¡±ï¿½

4182. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <D4jjVFAeb5L5Ew2z@ifwtech.demon.co.uk>
Source record: 60337

Reg Edwards wrote:
>A 200-watt, 100KHz, switched power supply a few inches away from the
>receiver input circuits makes a mess of the signal to noise ratio.
>--
>Reg.
>==========
>http://www.btinternet.com/~g4fgq.regp
>==========
>Don W6JL <W6JL@ixpres.com> wrote in message
>news:392ECAFF.50BF@ixpres.com...
>> Dean,
>>
>> Today there is no need to use 60 Hz magnetics in HV power
>supplies.
>> Much less expense and weight and much better regulation when you run
>a
>> 100 KHz switcher. Why the manufacturers of amateur HF amps are
>still
>> using 60Hz heavy transformers, I don't know. Must be cheaper for
>them?
>> For example, see article in Feb 1991 QEX on a 2KW switcher.
>>

Probably a combination of cost, EMC (the QEX design was notable for its complete lack of EMC precautions!) and reliability - the traditional transformer supply has much less to go wrong.

That only leaves weight... and I'm tempted to say that you 60Hz types don't know what a real heavy transformer is :-)

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

4183. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <#3le6R9x$GA.261@cpmsnbbsa06>
Source record: 60338

Ian White, G3SEK wrote in message ...

>That only leaves weight... and I'm tempted to say that you 60Hz types
>don't know what a real heavy transformer is :-)
>
It only hertz if you try to pick it up while connected to the mains!

Mike Lucas W5CHR
Memphis, Tenn

4184. FM to AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: pencilneck <bullmeat@my-deja.com>
Message-ID: <8gogdctdh1@nnrp1.deja.com>
Source record: 60339

Can anyone tell me what I'd have to do to modify one of the FM room transmitters(bugs) to transmit around 27Mhz.AM?Does it require more than using different value resistors ,capacitors and coils in the oscillator circiut?I never understood what would make a transmitter resonate on FM as opposed to AM and vice-versa.Thanks for any info.

Sent via Deja.com http://www.deja.com/
Before you buy.

4185. Midland 70-924B Repeater Help Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: JG <jgoldring@direcpc.com>
Message-ID: <5QPX4.12$sd.10028@news.direcpc.com>
Source record: 60340
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Just picked up a Midland 70-924B UHF Repeater to be configured as a digipeater hooked up to a Kantronics KPC9612 Plus
It has a 15 pin accessory connector on the back which I would assume is for a tone panel or other devices. Does anyone have any specs or hookup diagrams for this unit? It would be greatly appreciated.

Thanks to everyone.

Jay.

4186. Re: FM to AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <beRX4.15$WV.7017@news20.bellglobal.com>
Source record: 60341

pencilneck wrote in message <8gogdctdh1@nnrp1.deja.com>...
>Can anyone tell me what I'd have to do to modify one of the FM room
>transmitters(bugs) to transmit around 27Mhz.AM?Does it require more than
>using different value resistors ,capacitors and coils in the oscillator
>circiut?I never understood what would make a transmitter resonate on FM
>as opposed to AM and vice-versa.Thanks for any info.
>
The tuned circuits have to resonate at 27 MHz. This has nothing to do with AM or FM. That's the type of modulation is used (amplitude modulation = AM; frequency modulation = FM). Those cheap little FM circuits have both types of modulation in them, more of FM though. You'll have build a whole new circuit to go to 27MHz AM.

4187. Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: elaine.simons@cwcom.net
Message-ID: <3930015b.29145966@news.cwcom.net>
Source record: 60342

Hi all,
I'm new here, so don't flame me if I'm doing it wrong, but can any of you give me some advice as to how to build a really simple FM Rx.? I've looked on the net, but i can't find one that has less that 20 componants. It doesn't need to have a huge range, and should be fairly small. Any help would be appreciated

Edmund S.

CW
(|oo|)
\ /

4188. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: j.m.franke@larc.nasa.gov
Message-ID: <j.m.franke-2705001335480001@franke.larc.nasa.gov>
Source record: 60343

Have you tried:

http://www.somerset.net/arm/fm_only_intro.html

John WA4WDL

In article <3930015b.29145966@news.cwcom.net>, elaine.simons@cwcom.net wrote:

> Hi all,
> I'm new here, so don't flame me if I'm doing it wrong, but can any of
> you give me some advice as to how to build a really simple FM Rx.?
> I've looked on the net, but i can't find one that has less that 20
> componants. It doesn't need to have a huge range, and should be fairly
> small. Any help would be appreciated
>
> Edmund S.
>
> CW
> (|oo|)
> \ /
>

4189. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: HGE <hg.enqvistNO_SPAM@sympatico.ca>
Message-ID: <ouUX4.2248$ND5.161032@news20.bellglobal.com>
Source record: 60344

What frequencies? Do you mean broadcast FM?

4190. FS: Mica Caps (HV xmtr type)

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: boomer <storvikenNOstSPAM@excite.com.invalid>
Message-ID: <0a3e5562.6ca0583d@usw-ex0104-028.remarq.com>
Source record: 60345

For Sale: a mess of fixed (screw mount) transmitter-type
mica caps (useful for RF ampl const). Send for a 1-page list.
of values & WVDC. $5 each plus postage. --- boomer1@hitter.net --
(N4GL)

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

4191. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: "Geoffrey G. Rochat" <geoff@pkworks.com>
Message-ID: <8gpemlluk1@news.kersur.net>
Source record: 60346

Ayup. These days ya' cain't git nothin' with quality. Why, I remember
the days when trannies had so much iron in 'em they worked all the way
down to DC.

Mike Lucas W5CHR wrote in message <#3le6R9x$GA.261@cpmsnbbsa06>...
>
>Ian White, G3SEK wrote in message ...
>
>>That only leaves weight... and I'm tempted to say that you 60Hz types
>>don't know what a real heavy transformer is :-)
>>
> It only hertz if you try to pick it up while connected to the mains!
>
>Mike Lucas W5CHR
>Memphis, Tenn
>
>

4192. FS: MFJ-9020 20 Meter QRP CW Transceiver

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Pete Buehner <kc8er@harborcom.net>
Message-ID: <M%XX4.210$vP1.7300@ord-read.news.verio.net>
Source record: 60347

For Sale:

MFJ-9020 20 Meter QRP CW Transceiver. Includes the MFJ-412 Iambic Keyer Module (installed) and the MFJ-726 Narrow Audio CW Filter (installed). Rig less than 2 years old. Non-smoker. Appearance (on a scale of 10): 9.5! Everything in excellent working condition. With all documentation and in original box. Selling because I just purchased the MFJ-9420 with CW board.

Original Prices:

MFJ-9020 Transceiver 169.95
MFJ-726 Narrow Audio Filter 29.95
MFJ-412 Curtis Iambic Keyer 39.95

$239.85 Original Cost!

Asking: $180.00 Like New!
You pay for shipping.

Email address: kc8er@oh.verio.com
Phone: (440)-354-4538

4193. Re: FM to AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: Roger Leone <arleone@inreach.com>
Message-ID: <ZqZX4.151$q5.7187@news.inreach.com>
Source record: 60348

> Can anyone tell me what I'd have to do to modify one of the FM room
> transmitters(bugs) to transmit around 27Mhz.AM?Does it require more than
> using different value resistors ,capacitors and coils in the oscillator
> circiut?I never understood what would make a transmitter resonate on FM
> as opposed to AM and vice-versa.Thanks for any info.

There are two things involved in your question. Changing frequency to 27 mHz and changing the method of modulation to AM.

I don't know what the FM transmitter you are starting with uses for frequency control. If it is free running with a coil and capacitor for frequency setting, then, yes, you need new capacitor/coil combination to resonante on 27 mhz. However, as a free running oscillator, it may not stay where you want it.

If the FM transmitter uses crystal control, then you need to change crystals to set the frequency you want.

These changes are only going to affect the frequency of operation. You will need to make other coil and/or capacitor changes for the driver and output stages, filters, and possibly others as well to make sure you get RF out on the frequency you want.

Frequency Modulation (FM) means that information is carried by varying the frequency of the signal. The FM modulation is usually applied to the oscillator section of a transmitter to vary the frequency.

Amplitude Modulation (AM) means that information is carried by varying the amplitude (strength) of the signal. AM modulation is usually applied to the final amplifier stage.

You will need to build an AM modulator and disable the FM modulator.

Roger K6XQ

4194. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: RCM <robrk@pgh.net>
Message-ID: <393079D4.10915962@pgh.net>
Source record: 60349

If you can pick it up- it's not big enough.

4195. Delay line

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-27 00:00:00 UTC
From: "Clifton T. Sharp Jr." <clifto@clifto.com>
Message-ID: <39308C3D.2DF5B0A0@clifto.com>
Source record: 60350

How does an analog delay line work? For example, the massive old air-core
coil found in older vintage color TVs, used to delay luminance for a bit
to allow for all the extra chrominance processing?

--
+-+
| Cliff Sharp | "light jazz" is to jazz as "rubber band" is to orchestra. |
| WA9PDM | |
+-+-+-+-+-+-+-+-+-+- http://www.spamfree.org/ +-+

4196. Stuff to clear out

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: larryc@northwest.com
Message-ID: <3930730F.A0C@northwest.com>
Source record: 60351
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Free: Hallicrafters HT-32 tx. with copy of manual. As-is.unknown functionality. fairly good condition.

$25 - 6' prodelin fiberglass dish. Was used for satcom at 5ghz. & has waveguide feed.

Pickup in Portland , Oregon. No shipment.

reply to larryc@northwest.com

4197. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: cb711mack@aol.com
Message-ID: <20000528002005.16241.00000496@ng-fe1.aol.com>
Source record: 60352

I use 2 inch fiberglass pipe for masts, it comes in lengths of 30 and 40 foot each. You can also get it in different sizes too, my dad used a 6 inch diameter 44 foot tall piece with rotor at top and NO guy wires. It was stuck 4 foot in the dirt, and bracketed off at the 10 foot level to the side of the house, but that was it, and it stood up to high winds, we lived in tornado alley on TX/OK border....I have currently one 40 foot 2 inch mast up, it has been up for 4 years now, with two guy wires, and bracketed at 15 foot.

4198. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: k6mhe@arrl.net
Message-ID: <3930a53f.13888571@news.mcn.org>
Source record: 60353

Where do you purchase it?

Danny, K6MHE

On 28 May 2000 04:20:05 GMT, cb711mack@aol.com (CB711MACK) wrote:

> I use 2 inch fiberglass pipe for masts, it comes in lengths of 30 and 40 foot
>each. You can also get it in different sizes too, my dad used a 6 inch diameter
>44 foot tall piece with rotor at top and NO guy wires. It was stuck 4 foot in
>the dirt, and bracketed off at the 10 foot level to the side of the house, but
>that was it, and it stood up to high winds, we lived in tornado alley on TX/OK
>border....I have currently one 40 foot 2 inch mast up, it has been up for 4
>years now, with two guy wires, and bracketed at 15 foot.

4199. Re: Delay line

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Paul Keinanen <keinanen@sci.fi>
Message-ID: <q1r1js4q102ooq1ohbrhap8gvd1qsgfhsn@4ax.com>
Source record: 60354

On Sat, 27 May 2000 22:02:21 -0500, "Clifton T. Sharp Jr."
<clifto@clifto.com> wrote:

>How does an analog delay line work?

The electric signal is converted to sound and transmitted through a
suitable crystal and picked up by an other transducer at the other
end. The speed of sound is much less han the electric signal speed.
This is at least how the PAL delay line works, which delays the
chrominance signal by a full line period (64 us) to be summed after
inverting with the current chroma signal (which has also been inverted
since last line) to cancel any phase errors, which otherwise would
cause hue errors.

In very old computers, acoustic delay lines filled with mercury was
used as the main memory.

>For example, the massive old air-core
>coil found in older vintage color TVs, used to delay luminance for a bit
>to allow for all the extra chrominance processing?

I guess you are referring to the less than 1 us delay in the wider
luminance channel to compensate for the propagation delay in the
narrower chroma channel. As far as I know, this is some kind of
special coaxial cable with low velocity factor.

4200. Re: Stuff to clear out

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Lamb <k7fm@teleport.com>
Message-ID: <OB9Y4.12632$NE3.780569@nntp1.onemain.com>
Source record: 60355
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi Larry:

I live in Newberg and would love the HT-32b. Please let me know. My telephone number if 538-4301 or you can e-mail me.

I can pick it up at your convenience.

Thanks, Colin Lamb

4201. Re: Stuff to clear out

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Lamb <k7fm@teleport.com>
Message-ID: <7O9Y4.12635$NE3.781438@nntp1.onemain.com>
Source record: 60356
Cross-posted to: rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.equipment

Hi Larry:

I just wrote you.

Would be willing to pay you some money for the transmitter as it matches my Hallicrafters receiver. I sold my last HT-32b after learning I had cancer - but the cancer went away and I was without my rig.

Thanks, Colin

4202. Re: Delay line

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: William Janssen <billj@calweb.com>
Message-ID: <3931335E.4B2BD5EC@calweb.com>
Source record: 60357

"Clifton T. Sharp Jr." wrote:
>
> How does an analog delay line work? For example, the massive old air-core
> coil found in older vintage color TVs, used to delay luminance for a bit
> to allow for all the extra chrominance processing?
>
Its a transmission line for the signal. I made one by winding a coil
on a dowel that had a layer of metal foil (insulated where it lapped
over).

The coil and distributed capacitance makes a transmission line that has
some delay. The amount of delay depends on the inductance and
capacitance.
Also the characteristic impedance depends on those same two values.

Bill K7NOM

4203. WTD:DIAGRAM FOR TR8400 UHF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Andrew Dykes <m1cwv@io92gw.fsnet.co.uk>
Message-ID: <8gre1vvrg1@newsg3.svr.pol.co.uk>
Source record: 60358

Hi has any one got a shematic for the TR8400 or better still a Tech manual.
Please

4204. Re: FM to AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Gord Skiffington <skiffing@nbnet.nb.ca>
Message-ID: <391A5B24.B5@nbnet.nb.ca>
Source record: 60359

or.....if you can get your "bug" to transmit on 27mhz, you ought to be able to slope tune it with your AM receiver as-is. Not even sure why you'd want to go (presumably) down to 27 Mhz for a bug though....most likely if the current freq is high then whatever it needs for an antenna will be MUCH more compact/efficient where it is......use a cheapo scanner to receive it. Best of luck though - tinkerin' is the GOOD stuff!

Gord VE1AJF

4205. Scanner squelch to activate relay???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Dan Barnawell <awarren233@freewwweb.com>
Message-ID: <y3bY4.5298$VO2.136596@newsread2.prod.itd.earthlink.net>
Source record: 60360

I need some info on using a Realistic pro-2025 16 channel scanner to activate a relay when the squelch is opened..... I want to use the scanner as a receiver on a remote base to key my 6 meter ham radio when the scanner receives a signal on the 440 mhz ham radio band.....Can anyone give me some information on this? I have been unable to find a schematic on the 2025 and I have been told that when the squelch opens there will be voltage come up on a pin inside the scanner..... Any ideas of how I might find that pin when I do not have a schematic? I am also open for any other advice on this subject.....

Thank you,
Dan (N4YSV)

4206. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Lionel <lbooth@ametro.net>
Message-ID: <8grg3t$lj0$1@news.datasync.com>
Source record: 60361

where do you get this stuff?

"CB711MACK" <cb711mack@aol.com> wrote in message
news:20000528002005.16241.00000496@ng-fe1.aol.com...
> I use 2 inch fiberglass pipe for masts, it comes in lengths of 30 and 40
foot
> each. You can also get it in different sizes too, my dad used a 6 inch
diameter
> 44 foot tall piece with rotor at top and NO guy wires. It was stuck 4 foot
in
> the dirt, and bracketed off at the 10 foot level to the side of the house,
but
> that was it, and it stood up to high winds, we lived in tornado alley on
TX/OK
> border....I have currently one 40 foot 2 inch mast up, it has been up for
4
> years now, with two guy wires, and bracketed at 15 foot.

4207. Re: HELP: Fiberglass mast source

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: k9sqg@aol.com
Message-ID: <20000528124309.16879.00000558@ng-fk1.aol.com>
Source record: 60362

Where are these fiberglass masts available? I'm sitting down so, what is the cost?

73

Evan

4208. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <39315a23.22677431@news.eunet.yu>
Source record: 60363
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

4209. Re: Scanner squelch to activate relay???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Michael Black <blackm00@Gloria.CAM.ORG>
Message-ID: <Pine.LNX.4.10.10005281338090.16981-100000@Gloria.CAM.ORG>
Source record: 60364

On Sun, 28 May 2000, Dan Barnawell wrote:

> I need some info on using a Realistic pro-2025 16 channel scanner to
> activate a relay when the squelch is opened..... I want to use the scanner
> as a receiver on a remote base to key my 6 meter ham radio when the scanner
> receives a signal on the 440 mhz ham radio band.....Can anyone give me
> some information on this? I have been unable to find a schematic on the 2025
> and I have been told that when the squelch opens there will be voltage come
> up on a pin inside the scanner..... Any ideas of how I might find that pin
> when I do not have a schematic? I am also open for any other advice on this
> subject.....
>
> Thank you,
> Dan (N4YSV)
>

Radio Shack is pretty good about having service manuals available for
their equipment, and I gather you can get them from even old equipment.
You'd have to order it, and I'm not certain of the specifics. Radio Shack
does have a website, it might be www.radioshack.com and that may have
the details about ordering.

With or without a schematic, if you're lucky the unit will use a standard
IC in the IF strip. Once you track down the data sheet for the device,
if the squelch is part of that IC, using it will be well defined.

Open the case, and look for a 14pin or more IC (assuming the receiver
isn't 25 years old). Chances are good that there will be a 455KHz ceramic
filter, a plastic block or thin rectangle usually marked with 455 and
the ones I've seen are orange or green and stand out, really close and
connected to some of the pins.

Get the number off the IC, and start looking in data books for a match.

If the data sheet shows a pin related to squelch, you're in luck. And
the data sheet should have a sample circuit schematic showing how things
are connected to it.

Michael VE2BVW

4210. Re: FM to AM

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Michael Black <blackm00@Gloria.CAM.ORG>
Message-ID: <Pine.LNX.4.10.10005281351530.16981-100000@Gloria.CAM.ORG>
Source record: 60365

On Sun, 28 May 2000, Gord Skiffington wrote:

> or.....if you can get your "bug" to transmit on 27mhz, you ought to be
> able to slope tune it with your AM receiver as-is. Not even sure why
> you'd want to go (presumably) down to 27 Mhz for a bug though....most
> likely if the current freq is high then whatever it needs for an antenna
> will be MUCH more compact/efficient where it is......use a cheapo
> scanner to receive it. Best of luck though - tinkerin' is the GOOD
> stuff!
>
> Gord VE1AJF
>

Of course, considering the type of receiver usually available for 27MHz,
I don't think slope detection will work.

Since the "bug" is undoubtedly not crystal controlled, and intended for
use with an FM broadcast receiver (ie wide deviation), when you try
listening to it on a narrow receiver like you'd find at 27MHz, you may
get nothing but a horrible mess. The narrow selectivity will only allow
the reception of a small portion of the carrier's deviation, and I don't
think that allows for proper demodulation. (The reverse, tuning a
narrow deviation signal on a wide deviation receiver, will give low
recovered audio because the deviation is only a small portion of the
slope, but at least the receiver is getting the full swing of the
transmitted signal).

Never mind that an LC oscillator at 27MHz will not be particularly
stable unless extreme care is put into it's design and construction.
An LC oscillator works in the FM broadcast band because the receivers
are wideband, so drift goes unnoticed.

Of course, this brings up the point that apart from other legalities,
an LC oscillator with wide deviation FM is not appropriate at 27MHz
where crystal control is expected and narrow signals are the norm.

Michael VE2BVW

4211. New Site! Amateur Radio Topsite

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: navkee <navkee@wishmail.net>
Message-ID: <959540969.640808@news.l3.wish.net>
Source record: 60366

Take a look at Http://www.navkee.tmfweb.nl
You can find here all the links to the greatest stuff for the shack like :
DX informations.
Manufactors.
R/TV Stations
Radio Societies
Scan Spot Freq
HF Electronics
Tubes
SSTV
Satelite
Shortwave
.....
.....
.....
AND A LOT OF MORE STUFF !!!!

4212. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: douglas dwyer <doug@ddwyer.demon.co.uk>
Message-ID: <EpGqcCANhYM5EweR@ddwyer.demon.co.uk>
Source record: 60367

In article <ouUX4.2248$ND5.161032@news20.bellglobal.com>, HGE <hg.enqvis
tNO_SPAM@sympatico.ca> writes
>
>What frequencies? Do you mean broadcast FM?
>
>
An amaszing two transistor circuit on this/last months readers circuits
in UK Electronics World.
--
douglas dwyer

4213. Wanted: old IF transformer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: Kenneth Scharf <kjre@flashcom.net>
Message-ID: <3931CA8D.D7ECDCB1@flashcom.net>
Source record: 60368

I am looking for an old IF transformer. The part I need would be in a 1 3/16 sq. can and have two compression trimmers on top. The unit would be a 455Khz First IF transformer, with an 'iron' core. An IF transformer pulled from an old "all american 5" radio would be fine, providing the coils were not open.

Please e-mail at: scharkalvin@yahoo.com or kjre@flashcom.net if you have such an item for sale or swap.

Thanks!

Kenneth Scharf WA2MZE

4214. Need small FM circuit diagrams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: fX <xbios@email.usertrust.com>
Message-ID: <3931D150.CB02372@hotmail.com>
Source record: 60369

Me and a roommate play paintball often and figured it would be fun to make some headsets with low-power FM transceivers. I've located numerous low-power FM transmitters but haven't found any small receivers. Could anyone point me to some circuit schematics for any good FM receivers and transmitters? I'd greatly appreciate it!

If anyone has any resources on motion detectors, I'd apreciate that too (for night paintball :)

-- Dan (X-Bios)

4215. Re: Need Old Tech Manual

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: "Michael A. Terrell" <michaelaterrell@hitter.net>
Message-ID: <3931B964.12678342@hitter.net>
Source record: 60370

Steve Robeson wrote:
>
> I need a tech manual for a Sonar Model G 11 meter transceiver. I picked it up
> basically as a "nostalgia" item at Dayton, but would like to try to get it
> operational
>
> I also need an original Sonar mic.

I don't remember, does the G use the big gray Mic with a carbon
element? If so, I think I have a few left, in storage.

>
> Direct e mail responses would be deeply appreciated.
>
> Thanks and 73
>
> Steve, K4YZ
>
> The nation that is ready to fight in peacetime is less likely to HAVE to fight
> in wartime......(Author unknown, but he probably wasn't a politician!)

4216. Re: High Voltage Probe Question

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: "Michael A. Terrell" <michaelaterrell@hitter.net>
Message-ID: <3931B81B.A2E15663@hitter.net>
Source record: 60371
Cross-posted to: rec.radio.amateur.misc,rec.radio.amateur.equipment,rec.radio.amateur.homebrew

glass2@glass2.lexington.ibm.com wrote:
>
> In <OraEjo#w$GA.325@cpmsnbbsa07>, "ma_locksmith" <ma_locksmith@email.msn.com> writes:
> >A high voltage probe is nothing more than a large value resistor that will
> >withstand the high voltage. It is used to make a voltage divider based on
> >the input resistance of the meter. If you use a 20 Mohm input meter, then
> >the probe will work but read approximately twice what the value of voltage
> >is. For a typical 100:1 divider, the meter input resistance is 10 Meg, the
> >probe resistance is 990 Meg. This adds up to 1000 Meg to 10 Meg, or 100 to
> >1. The same probe in a 20 Meg meter ends up with 1010 Meg to 20 Meg or
> >approximately 50 to 1.
> >
> >The common input for multimeters is 20K ohms per volt. The only meters with
> >higher input resistance are those that have internal amplifying electronics.
> >If it's an analog meter, then it's probably 20 K. Look on the meter face,
> >it is sometimes stated there.
> >
> >Ed
> >
> ><goldenbadger@mindspring.com> wrote in message
> >news:3928ac05.358870784@nntp.mindspring.com...
> >> I have a couple questions, both related to high voltage probes -
> >>
> >> My second question is how can you determine (i.e. measure) the input
> >> impedance of a meter? I have a really old cheap one that might be
> >> 10Mohm if that is a common standard, but would like to confirm before
> >> I relied on it.
> >>
> >> Thanks,
> >> any help will be really appreciated
>
> I feel I should comment here to inject a word of safety. While
> technically correct that a high voltage probe is nothing more than a
> large value resistor, there are some other design considerations
> which must be considered. Firstly, the insulation on the probe must
> be able to withstand the voltages being measured. It's no fun to
> have a flashover occur while you're holding the probe on a 30KV
> circuit. Don't forget, too, that probes may get dirty or wet, and
> that this can significantly reduce their voltage handling capacity.
>
> Nextly, the high value resistor must be able to take the voltage
> applied to it. Not all resistors can withstand high voltages, and
> they may flashover or breakdown. If this occurs, the minimum damage

> you can expect is to fry the meter (Worst case might be frying
> yourself!). The power handling capability of the resistor probably
> won't be a problem, but it would be good engineering practice to
> work the equations to make sure of this.
>
> Another concern involves the switching of the meter. If you're
> using an older style meter with a mechanical switch, what happens
> when you operate the switch? Is the input disconnected from one
> contact before making with another contact? What will be the
> voltage on the switch when the contacts break? Will this cause the
> switch to arc over?
>
> Finally, if you're going to be measuring AC voltages with the probe,
> you'll have to consider the aspect of any capacitance associated
> with the meter, leads, or probes. 1000M of resistance can result in
> a significant RC circuit.
>
> So, before attempting to construct your own high voltage probe,
> please spend a few minutes considering the failure modes possible
> and the consequences.
>
> Dave
>
> P.S. Standard Disclaimer: I work for them, but I don't speak for them.

The older VTVM's used a divider network that totaled 10 Meg ohms, and so do the DVM's that I've worked on. The range was selected by picking a tap, not switching out resistors, so the load to the ground lead was a constant 10 Meg ohms. Also, if you have a meter with a 20 Meg ohm input impedance, parallel another 20 Meg ohms and you won't need to scale your readings. Above all, make sure the ground lead is in good condition, and never use a weak alligator clip. If the ground comes off, you can really get hurt, or killed.

4217. Re: Ferrite Rods

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-28 00:00:00 UTC
From: "Michael A. Terrell" <michaelaterrell@hitter.net>
Message-ID: <3931C214.CB896488@hitter.net>
Source record: 60372

Reg Edwards wrote:
>
> The cost of ferrites lies in producing and controlling within close
> limits the various proportions of the long string of precise chemical
> compounds and clearing out the even longer string of deleterious
> substances. High pressures and high temperatures are involved.
>
> The shaping and forming of ferrite materials is also an expensive
> process. They are diamond hard and brittle. Have you ever tried
> sawing a ferrite rod in half ? I have never yet succeeded even after
> ruining as many as three, cobalt and tungsten, high-speed steel, saw
> blades. The trick is to saw a notch all the way round the
> circumference and snap the beast in two. It occasionally works.
>
> Any home-made mixtures, baked in the oven, poor-man's substitutes, are
> obviously entirely different materials. One might just as well
> experiment with iron filings and superglue.
>
> Or wind some wire on a 6" diameter, air-core, pvc drain pipe.
> --
> Regards, Reg, G4FGQ.
> ==============================
> http://www.btinternet.com/~g4fgq.regp
> ==============================
> Lyle Koehler <lyle@mlecmn.net> wrote in message
> news:391EEB02.494F9EA0@mlecmn.net...
> >
> >
> > Wilbur wrote:
> > >
> >
> > >
> > > The interest I have is making my own rod out of bulk powder and
> epoxy.
> > > Like you said, the rods are expensive---especially from having to
> build
> > > a large core out of smaller lengths. I'm interested in making my
> own
> > > rods (or one large rod) out of bulk powder and epoxy. I was told
> this
> > > method was employed for short runs in an RF lab for evaluation
> purposes
> > > but I have no other information. They would get powder in sample
> bags

> > > about the size of a quart baggie, mix with epoxy then pour it into
> a
> > > mold, cure, whereupon it would it be tested electrically.
> > >
> >
> > Somewhere in the dim past I've seen "recipes" for making your own
> > ferrite powder -- I believe it was in a book about experimenting
> with
> > magnetics, but can't remember any other details. Maybe there is an
> old
> > Scientific American "Amateur Scientist" column that describes the
> > technique.
> >
> > > BTW, you are right about the high cost ferrite rods---why is this
> so
> > > anyway?
> >
> > Beats the heck outa me. The price of ferrite rods seems to have
> risen at
> > a pace that exceeds inflation. Must be supply and demand.
> >
> > --
> > Lyle, K0LR
> >
> > http://www.computerpro.com/~lyle

How about trying the iron dust in toner from a photocopier?

4218. Subscribe to VK-ZL QRP mailing lists

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: Peter Parker <parkerp@alphalink.com.au>
Message-ID: <3932fc7e@news.alphalink.com.au>
Source record: 60373
Cross-posted to: aus.radio.amateur.misc,rec.radio.amateur.homebrew

Radio enthusiasts interested in QRP (low power operating) or homebrewing
are invited to subscribe to the VK-ZL QRP mailing list. The list now has
over 60 members and has hosted some interesting discussions on various
aspects of QRP and homebrewing.

Click on the link below to read the list's archives and to subscribe if you
find
the material of interest.

http://www.egroups.com/archives/vkzlqrp

73,
--

Peter Parker

Amateur Radio: VK3YE

E-mail: parkerp@alphalink.com.au
URL: http://www.alphalink.com.au/~parkerp

4219. Ham Radio Design Freeware

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: Charles Reichert <kd9jq@rsg.org>
Message-ID: <393288D1.9F7497D3@rsg.org>
Source record: 60374

The following are Ham Radio Design Programs (DOS) that I'm
providing Free on my Web Site at;

http://www.mbn.net/kd9jq/hamradio/

ASP 4.0 - Amplifier Simulation Program for designing
FET and Bipolar Preamps, RF, IF Stages. Plots Gain,
Output VWSR, and NF while providing design parameters.
Other features also. Documentation.

TAP 2.0 - Triode Amplifier Program for designing High Power
Triode Grounded Grid Amplifiers. Provides Input, Output
Matching useable up through 2 Meters and design parameter's
beyond that. Calculates Bias voltage for specified Class
or Conduction Angle. Design Parameters, Documentation.

PLL2 and PLL3 for 2nd and 3rd Order Phase Locked Loop
Design. User inputs parameters and and design parameters
are calculated. BODE plots of Loop Response, Transient
provided. Documentation.

Misc Utilities - Utility programs for *BroadBand matching,
*Transistor Compression Pt., LP, *HP Filter design, and
PI or T Attenuator. The first 3 programs I added a GUI and
some programming corrections from code obtained from
RF Design Magazine a number of years ago.

The CATCH.....None. Just my way of giving back to the hobby.

73 Chuck KD9JQ

4220. W8MMQ.NET

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: Daniel Hicks <dahicks@email.com>
Message-ID: <BIwY4.10194$hL1.667560@bgtnsc04-news.ops.worldnet.att.net>
Source record: 60375

The W8MMQ web site at:

http://w8mmq.net/

is now back online. We have updated the radio mods library recently, with over 2,000 radio modification files.

Also, be sure to check out the W8MMQ antique radio page:
http://www.w8mmq.net/oldradio/

4221. Use Optolinx to Program Kenwood TM-G707

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: "David M. Hitchner" <BiteMe@Spammers.com>
Message-ID: <ivwY4.12167$85.51478@news1.rdc1.tx.home.com>
Source record: 60376
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Thought I would pass along this information:

http://members.home.net/hitchner/OptoTMG707.htm

--
David M. Hitchner - KD5EIS - nospam@home.com
Baton Rouge, LA

Baton Rouge Area Scanning
Web Page: http://members.home.net/hitchner
-
ASDS - Anti-Spam Defense System - Do not Auto-Reply
Use my last name in e-mail address above for replies.

4222. HP-8558B Panel Meter

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: Ib Holst Jorgensen <oz9dr@post1.tele.dk>
Message-ID: <v1c5jsoi4n4dbiaariapmsp1h15k9mtojd@4ax.com>
Source record: 60377

Loking for a diagram to the HP8558B Spectrum Ann.
Panel Meter Assembly: Type 5060-9124.
Also interested in a complete working Panel Meter.
Regards
Ib
email to oz9dr@post1.tele.dk

4223. Re: 2m glass on glass antenna plans wanted

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3932D9EE.6F41012B@bellatlantic.net>
Source record: 60378

It's in the 1996 ARRL Radio Amateur Handbook
Ed

Shaun & Annette wrote:

> Does anyone know where I would find home brew plans for the above antenna??
>
> Many thanks
>
> Shaun

4224. Re: 6mtr Xvtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3932DCDD.23FFB1D9@bellatlantic.net>
Source record: 60379

The Ten-Tec 20m ==> 6m transverter is easily
modifiable to 10M => 6m. I've done it. The
Ten-Tec kit costs $95.00. You need one
(or 2) xtals for 50-52 or 52-54. I used 2
with diode switching. You need to change
a few parts. The LO in the Ten-Tec kit is
set for 36Mhz you change it to 22 and 24
(your 10M signal is 28 or 29 MHZ;
22+28 = 50, 22+29 = 51, 24+28 = 52,
24+29 = 53) The parts you change, other
than the xtal are to set the frequency
of the L/C circuits in the LO. If you
decide to build it, contact me and I'll
give you the values I used. Ed

Chris NG3F wrote:

> looking for a 6meter transverter schematic for homebrewing.
> using 10m in (have FM installed) to 6m out.
>
> tnx and 73's
>
> Chris NG3F

4225. Re: Mic Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: ehsjr@bellatlantic.net
Message-ID: <3932F2AC.E08659C1@bellatlantic.net>
Source record: 60380

John,

When lightning killed my ICOM 745 microphone, I replaced
the electret element with one from Radio Shack. Works
great and only cost a few bucks. You could brew one from
an old CB mike replacing the element, or build a desk mike
without spending a lot. The connector will cost you more than
the element.

The lightning strike was interesting. I heard thunder and ran
to the shack to disconnect stuff. Got there in time to watch an
arc jump out of the old style ma bell telephone sitting on the
desk near the mike. The arc went from the base of the phone
into the mike. The phone (instrument) was unaffected but
we lost phone service for over a day and cable TV for a few
days. A solid state wall phone was toast. (No visible damage)

Ed

"John C. Ko" wrote:

> Without spending ridiculous price for electroret condenser type mic for Icom
> rig, I would rather use studio type mic with compensation amplifier with
> bells and whistles (tone controls and compressions - if possible).
>
> I have look through ARRL Handbook, but nothing useful can be found.
>
> Is anybody out there can shed some lights on this ?
>
> Many thanks in advance.
>
> John / N2FNO

4226. WTB: Racal RA6790/GM Parts

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-29 00:00:00 UTC
From: Fred Allen <fallen-idc@worldnet.att.net>
Message-ID: <01bfc9c9$a5a310c0$f4864b0c@default>
Source record: 60381

I need the following parts for my Racal RA6790/GM.

1) LCD, (Function Display) Part# 08526

2) ISB Option

3) Top and bottom covers.

Will also consider a Junker Unit. I also need a source for the 2.4 dc
Ni-Cad Battery.

Fred

fallen-idc@worldnet.att.net

4227. Re: Heathkit SSB and CW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: msix@nmia.com
Message-ID: <8h0u1m$jr9$1@hume.nmia.com>
Source record: 60245

Reg Edwards wrote:
:>What's the IF ? Or praps it doesn't matter. ;o)

this may help...
73 - John W7ZFB
1400 Catron SE Albq, NM 87123
****
* Homebrewer since 1947 CW BoatAnchors Norcal #930 *
* BA CW freqs - 3578, 7050, 7147, 14050, 21050, 28050 *
****

> > > From: n8lqr@juno.com
> > > To: gswynar@durham.net
> > > Subject: Re: "SB"-Series AM Filter...
> > > Date: January 9, 2000 10:27 PM
Here is a list of the large size filters that Heath used:
Part no. Type Bandpass, 6 dB--60dB Used on
404-200 SSB 2.1 kHz 5 kHz 100/300/400
404-201 AM 3.5 kHz 14 kHz same
404-202 CW 400 Hz 2.5 kHz same

Here is a list of the small size filters that Heath used:
Part no. Model no. Type Bandpass6/60 Used on
404-283 SBA-310-2 SSB 2.1 kHz/5 kHz 300/400
404-284-1 SBA-301-2 CW 400 Hz/2 kHz same
404-285-1 SBA-301-1 AM 3.75 kHz/10 kHz same
404-314 -------- AM 5 kHz/15 kHz 310/313
404-328 SBA-310-1 SSB 2.1 kHz/7 kHz 100/101/310

404-548 -------- CW 400 Hz/2 kHz 104/104A only
Jan Maldups, N8LQR

4228. Reworking an MFJ 1786 Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Irv Finkleman <finkirv@cadvision.com>
Message-ID: <3933FB6C.9BBC4C3F@cadvision.com>
Source record: 60246

I just picked up an MFJ-1786 Magnetic Loop Antenna. It had
a few problems and had been tampered with. I have restored
it to original condition and am just waiting for decent
weather to put it outside. I have a few questions and would
like to talk to anyone who has spent time with one of these
antennas. Thanks in advance for any replies.
--
Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

4229. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <39341B7B.4CAC@ixpres.com>
Source record: 60247

WELL!

I thought my comments might stir something up, HI.

Lessee, how many pounds would a shield cover and a good lowpass line
EMI filter weigh (and cost) for, say, starting at the 10th harmonic of
100 KHz? Methinks a lot less than one each 60Hz 2KVA transformer.
We are living with 250+ watt switchers now in our PC's, made dirt
cheap in high volumes, including EMI filtering to meet FCC Class B.
On the other hand, I have heard of Icom's switcher that made it to
market, and generated gaboons of RFI.

Don, W6JL

RCM wrote:
>
> If you can pick it up- it's not big enough.

--
ï¿½ï¿½à¡±ï¿½

4230. Re: Ham Radio Design Freeware

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: jyazel@asacomp.com
Message-ID: <39342a4b.1802538@news.asacomp.com>
Source record: 60248

>The following are Ham Radio Design Programs (DOS) that I'm
>providing Free on my Web Site at;
>
>http://www.mbn.net/kd9jq/hamradio/
>
---------- SNIP ----------

I could make a selection on the page, but couldn't get it to download.

Any ideas?

Jack

4231. Multiple LED's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <393455EA.A4DC87E@home.com>
Source record: 60249

I am building a device with multiple (i.e. over 100, perhaps 180) T 1 3/4 LED's - red, blue and green ultrabrites and using PWM to control the intensity. Reading through Agilent's ap-notes I see that LED's in parallel is not recommended (i.e. each LED is recommended to have its own series resistor). How strictly should this discipline be followed - i.e. not paralleling any?

4232. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: "Ian White, G3SEK" <G3SEK@ifwtech.com>
Message-ID: <pzOZHCAxwCN5EwSL@ifwtech.demon.co.uk>
Source record: 60250

Don W6JL wrote:
>WELL!
>
> I thought my comments might stir something up, HI.
>
> Lessee, how many pounds would a shield cover and a good lowpass line
>EMI filter weigh (and cost) for, say, starting at the 10th harmonic of
>100 KHz? Methinks a lot less than one each 60Hz 2KVA transformer.

Weight is no contest - the switcher wins, every time.

Cost and reliability are much less certain.

> We are living with 250+ watt switchers now in our PC's, made dirt
>cheap in high volumes, including EMI filtering to meet FCC Class B.

But unfortunately we are *not* yet living in an era of 2.5kW+ switchers that are easy to custom design and dirt cheap to make in small volumes - and we may never be. Large, high-voltage switch-mode supplies are highly specialized items to design, and suitable transformer cores in particular are difficult to source in small quantities.

> On the other hand, I have heard of Icom's switcher that made it to
>market, and generated gaboons of RFI.
>
Since the Icom switcher must have passed the regulatory tests, it shows that the standards themselves aren't good enough to protect users of weak signals from interference... but we probably could have guessed that.

73 from Ian G3SEK Editor, 'The VHF/UHF DX Book'
'In Practice' columnist for RadCom (RSGB)
http://www.ifwtech.com/g3sek

4233. Re: Heathkit SSB and CW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Mike Lucas W5CHR <lucascom@email.msn.com>
Message-ID: <eoQk41ny$GA.319@cpmsnbbsa07>
Source record: 60251

Reg Edwards wrote in message <8h0n1conu1@plutonium.btinternet.com>...
>What's the IF ? Or praps it doesn't matter. ;o)
>

Reg: Most of the Heathkits used a 3395 KHz IF. Some of the '70's Kenwoods used that frequency also. Yaesu used a 31-something IF about the same time. Most filters were 6-pole for SSB and 4-pole for CW. INRAD I believe lists replacement filters and attendant specs for lots of radios. For really good, really high priced filters, Network Sciences is hard to beat.

Mike Lucas W5CHR
Memphis, Tenn.

4234. WTB: NOS Tubes

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Bluestrat <bluestat@erols.com>
Message-ID: <393477AA.FD520289@erols.com>
Source record: 60252

Looking for large or small quantities of the following NOS (preferably
in
original boxes) tubes.

6V6GT, 6L6GC,EL37, 5AR4/GZ34, 5Y3GT, 5R4, 5V4, 6K6GT, 6CA7/EL34,
6BQ5/EL84, 7189A, 7027,
7591A, 7581A, 12AX7A/ECC83, 5751, 12AY7/6072, 7025, 12AT7, 7199, 5881,
6550,
7868, KT-66,77,88.

Also, octal socket extenders/savers.

Please list brand, price, qty available, and whether in
original box.

Thanks,
Mike
703-430-8713
bluestat@erols.com

4235. Re: how to Replace a crystal in a QRP rig with a tuned circuit

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8gv0bc$i481@icet.net.nih.gov>
Source record: 60382
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur,sci.electronics.basics

fretman_2@my-deja.com wrote:
: I tried putting the output of my RF signal generator into the xtal
: socket of my Pixie II....got nothing. Putting the VFO signal into the
: xtal socket may work on some radio's but not mine.
:
: Bill
: KD4PWB
:

Try this. Connect the signal generator to the xtal socket
with a 1/4 wave long coax cable. Remember to take into account the
velocity factor or the coax. This creates a low Z to high Z matching
transformer. Don't let the long length bother you. It works.
-- Andy (WA3LTJ)
:
: In article <gSOW4.12208$yi.58742@news02>,
: "Bob Camp" <bob@cq.nu> wrote:
: > Curtis,
: >
: > Assuming it is an AT cut crystal and running at typical HF band
: > frequencies the crystal probably has:
: >
: > Q > 50,000 , might be > 500,000
: > Resistance < 60 ohms, might be < 10 ohms
: > Temperature stability 0 to 50C < +/- 100 Hz at 10 MHz, might be < +/-
: > 20 Hz
: > Time stability < < 0.1 Hz per day at 10 MHz
: >
: > The crystal is commonly modeled as a series tuned circuit with an
: > additional capacitor across the whole thing. For a bunch of odd
: > reasons this can look like a parallel tuned circuit at some
: > frequencies.
: >
: > Your best bet is to build a VFO with the range you are looking for and
: > feed it's output into the crystal socket on the radio. That way you
: > can optimize the VFO and you don't mess up the radio. About all it
: > will cost you is another transistor and about 3 ma or so of current.
: >
: > Hope this helps
: >
: > Bob Camp
: > KB8TQ
: >

: > "Curtis Scholl" <cscholl@izzy.net> wrote in message
: > news:392B26BC.6B7457A2@izzy.net...
: > > Hi Group:
: > >
: > > I have a number of schematic diagrams with crystals in one
: > frequency
: > > or Variable with loading. How does on create an equivalent circuit
: > with
: > > the same characteristics of a crystal? what is involved?
: > > 1. I would assume a resistance of the crystal itself
: > > 2. I would assume an equivalent "loading" to match the capacitance
: > of
: > > the crystal
: > > 3. Maybe Q is important?
: > >
: > > I would, given my understanding, that the crystal has a high
: > internal
: > > resistance? One cannot just replace the crystal with a tuned series
: > or
: > > parallel LC combination.
: > > Am I rehashing an old subject?
: > >
: > > Curtis Scholl
: > > cscholl@izzy.net
: >
: >
:
:
: Sent via Deja.com http://www.deja.com/
: Before you buy.

--

Andrew R. Mitz, Biomedical Engineer arm@helix.nih.gov
Laboratory of Systems Neuroscience
Section on Neurophysiology
National Institute of Mental Health
Bethesda, Maryland 20892-4401

4236. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8gv0lo$i482@icet.net.nih.gov>
Source record: 60383

elaine.simons@cwcom.net wrote:
: Hi all,
: I'm new here, so don't flame me if I'm doing it wrong, but can any of
: you give me some advice as to how to build a really simple FM Rx.?
: I've looked on the net, but i can't find one that has less that 20
: componants. It doesn't need to have a huge range, and should be fairly
: small. Any help would be appreciated
:
: Edmund S.
:
: CW
: (|oo|)
: \ /
:

I found the same problem, so I designed a very nice little FM
radio. It is simple and performs very well. Check out the
FM radio project on my web site:
www.somerset.net/arm/fm_only.html

Andy Mitz (WA3LTJ)
Collector of FM only radios

4237. Re: Need small FM circuit diagrams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8gv0tu$i483@icet.net.nih.gov>
Source record: 60384

fX (xbios@email.usertrust.com) wrote:
: Me and a roommate play paintball often and figured it would be fun to
: make some headsets with low-power FM transceivers. I've located numerous
: low-power FM transmitters but haven't found any small receivers. Could
: anyone point me to some circuit schematics for any good FM receivers and
: transmitters? I'd greatly appreciate it!

For a simple receiver (FM broadcast band), try
www.somerset.net/arm/fm_only.html

:
: If anyone has any resources on motion detectors, I'd apreciate that too
: (for night paintball :)
:
: -- Dan (X-Bios)
:

--

4238. How do I wire a VOX for HT to my FT-847 PTT???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Dan Barnawell <awarren233@freewwweb.com>
Message-ID: <v9FY4.11354$VO2.274660@newsread2.prod.itd.earthlink.net>
Source record: 60385
Cross-posted to: rec.radio.amateur.homebrew,rec.radio.amateur.misc

I got a VOX headset for an Alinco HT and I want to wire it to my FT-847 PTT.. What I need to know is how to make this thing close the circuit on the PTT connection on the 847...I am sure I must get power to the VOX unit somehow.... The plug on it (for the mic) has three wires.... One goes to the tip, 1 goes to the center ring and the other goes to the shaft....Where does it get its power from? Does the alinco HTs have power on either the ring or the tip of the mic plug??? I have been told that this VOX also works on some icom HTs.... Can anyone give me some advice?

Thanks,
Dan (N4YSV)

4239. Re: Mic Amp

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: W2EB <n2tpaNOn2SPAM@juno.com.invalid>
Message-ID: <0252e8d6.460a3784@usw-ex0103-023.remarq.com>
Source record: 60386

I use the Radio Shack electret mic element for my station mic.
I fed it with a well regulated and filtered +8 volts from a
78L08, and into a standard mic preamp made from a NE5532 Op
Amp. The first section of the Op amp is configured as a non-
inverting amp with gain variable from 1 to 20 dB. The second
section I use to drive a solid state VU meter. I like to know
where my audio is without relying on the ALC metering on my rig
to tell me.
If you don't want the bells and whistles, simply run the
voltage source to the mic through a 4.7K resistor. Place a
capacitor between this assembly and your rig's audio input. This
will provide relatively decent mic audio for your rig.

73,

Bill

* Sent from RemarQ http://www.remarq.com The Internet's Discussion Network *
The fastest and easiest way to search and participate in Usenet - Free!

4240. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Lumpy <lumpy@digitalcartography.com>
Message-ID: <3933a4c3@news.peakpeak.com>
Source record: 60387

Lumpy wrote:
> Maybe Apple/Mac will enter the xceiver game
> and make their cases transparent blue/red/green...

And added later:
Now in QST I see an ad for an ICOM HT with
a blue transparent case. Guess it's happening
after all.

73 - n0eq

4241. Re: + + + + Paint Your Mobile Rig WHITE! + + + +

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Lumpy <lumpy@digitalcartography.com>
Message-ID: <3933a53b@news.peakpeak.com>
Source record: 60388

Butch Magee wrote:
> ...I found this really nice dinner napkin
> at one of the motels...extra tip to the
> waitress let me carry one out stuffed in my pants...

Lumpy gests:
Bet that napkin placement made you the
hit of the disco after dinner...;-)

n0eq

4242. WTB: Heathkit SSB and CW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Hercules <hercules@coolmail.net>
Message-ID: <8h0e8h$le7$1@nslave1.tin.it>
Source record: 60389

I need both filters (2.4kHz SSB and 400Hz or 500Hz CW) for the receiver I'm about to build.

4243. Re: Need small FM circuit diagrams

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Leon Heller <leon_heller@hotmail.com>
Message-ID: <8h0nandic1@nnrp1.deja.com>
Source record: 60390

In article <3931D150.CB02372@hotmail.com>,
fX <xbios@email.usertrust.com> wrote:
> Me and a roommate play paintball often and figured it would be fun to
> make some headsets with low-power FM transceivers. I've located
numerous
> low-power FM transmitters but haven't found any small receivers. Could
> anyone point me to some circuit schematics for any good FM receivers
and
> transmitters? I'd greatly appreciate it!

Try the Philips TDA7000.

Leon
--
Leon Heller, G1HSM
Tel: (Mobile) 079 9098 1221 (Work) +44 1327 357824
Email: leon_heller@hotmail.com
Web: http://www.geocities.com/SiliconValley/Code/1835

Sent via Deja.com http://www.deja.com/
Before you buy.

4244. WTB Antenna SWR Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Donald Smith <desmith@innercite.com>
Message-ID: <3933D66E.4E6490A8@innercite.com>
Source record: 60391
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Might anybody out there in Radio Land have an extra Antenna Analyzer that they might no longer be in need of. I need one for HF, VHF and maybe even up to 450. Will consider any and all units available. Can be MFJ or another brand. Please respond by Email. Thanks and 73's
Don KB6GQA

4245. Re: Heathkit SSB and CW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: Reg Edwards <G4fgq.Regp@btinternet.com>
Message-ID: <8h0n1conu1@plutonium.btinternet.com>
Source record: 60392

What's the IF ? Or praps it doesn't matter. ;o)

4246. Re: WTB Antenna SWR Analyzer

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: ddoss@i1.net
Message-ID: <WURY4.4$7X4.207529@news1.i1.net>
Source record: 60393
Cross-posted to:
rec.radio.amateur.antenna,rec.radio.amateur.boatanchors,rec.radio.swap,rec.radio.amateur.homebrew,rec.radio.amateur.misc

Look UP two listings on this ng. There's an MFJ-259B at a reasonable
price.

Donald Smith <desmith@innercite.com> wrote:

>Might anybody out there in Radio Land have an extra Antenna Analyzer
>that they might no longer be in need of. I need one for HF, VHF and
>maybe even up to 450. Will consider any and all units available. Can
>be MFJ or another brand. Please respond by Email. Thanks and 73's
>Don KB6GQA

4247. Re: WTB: Heathkit SSB and CW filters

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-30 00:00:00 UTC
From: n2ey@aol.com
Message-ID: <8h0tncirs1@nnrp1.deja.com>
Source record: 60394

In article <8h0e8h$le7$1@nslave1.tin.it>,
"Hercules" <hercules@coolmail.net> wrote:
> I need both filters (2.4kHz SSB and 400Hz or 500Hz CW) for the
receiver I'm
> about to build.

Hello!

What's the design? Hollow- or solid-state? How many do you need, and
what about other parts?

I have some of the SB/HW 100/101 SSB filters, and also a set of
heterodyne crystals. Plus lots of info on how they work. Always looking
for ideas, too.

CF is roughly 3395 kHz. Z in/out 2000 ohms, resistive.

The CW filters show up on ebay at times, and prices vary all over the
place.
>
73 de Jim, N2EY
FISTS #4360
BIT #0001

Sent via Deja.com http://www.deja.com/
Before you buy.

4248. Re: Midland 70-924B Repeater Help Needed

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: rnelson@farmtel.net
Message-ID: <39346992.2297911@news.mwci.net>
Source record: 60253
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc

If you expect a direct reply to your question, you need to post from a
valid e-mail address.

My reply direct to you bounced.

Randy
>Just picked up a Midland 70-924B UHF Repeater to be configured as a
>digipeater hooked up to a Kantronics KPC9612 Plus
>It has a 15 pin accessory connector on the back which I would assume is for
>a tone panel or other devices. Does anyone have any specs or hookup diagrams
>for this unit? It would be greatly appreciated.
>
>
>Thanks to everyone.
>
>Jay.
>
>
>

4249. Re: Multiple LED's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sj992ufc5pj120@corp.supernews.com>
Source record: 60254

In article <393455EA.A4DC87E@home.com>, jdwalton@home.com says...
>
>I am building a device with multiple (i.e. over 100, perhaps 180) T 1
>3/4 LED's - red, blue and green ultrabrites and using PWM to control
the
>intensity. Reading through Agilent's ap-notes I see that LED's in
>parallel is not recommended (i.e. each LED is recommended to have its
>own series resistor). How strictly should this discipline be followed
-
>i.e. not paralleling any?
>
This is done mainly because each led has a very slightly differant
voltage drop, and when you put them in parallel they will have
a drastically differant brightness. One will always be brighter than
the other if you have two in parallel. So the resistors become
'equalizers' by nature.

4250. Re: Reworking an MFJ 1786 Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: hexter@blazenet.net
Message-ID: <sj998oce5pj175@corp.supernews.com>
Source record: 60255

In article <3933FB6C.9BBC4C3F@cadvision.com>, finkirv@cadvision.com
says...
>
>I just picked up an MFJ-1786 Magnetic Loop Antenna. It had
>a few problems and had been tampered with. I have restored
>it to original condition and am just waiting for decent
>weather to put it outside. I have a few questions and would
>like to talk to anyone who has spent time with one of these
>antennas. Thanks in advance for any replies.
>--
>Irv Finkleman,
>Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
>Calgary, Alberta, Canada
>
I have one, and i love it. seems to work well. One word of caution,
it has such an extremely high Q that it is hard to get the SWR balanced,
and the bandwidth is so narrow, you must re-tune if you move even a few
KHZ. When you are 'dialed in' exactly right, it is hard to beat this
little 'apartment dweller sized' antenna!!!

4251. Re: Ham Radio Design Freeware

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: "J.H. Dettingmeijer" <srikasmo@wxs.nl>
Message-ID: <3934EC2C.BB62A6E@wxs.nl>
Source record: 60256

jyazel@asacomp.com wrote:

> >The following are Ham Radio Design Programs (DOS) that I'm
> >providing Free on my Web Site at;
> >
> >http://www.mbn.net/kd9jq/hamradio/
> >
> ---------- SNIP ----------
>
> I could make a selection on the page, but couldn't get it to download.
>
> Any ideas?
>
> Jack

I could...
No ideas.
73
Jan.

4252. Need Schematic For Miniscope

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Ron Wicker <ronwick@flash.net>
Message-ID: <qF6Z4.565$xM5.25320@news.flash.net>
Source record: 60257
Cross-posted to: news.electronics.repair,rec.radio.amateur.boatanchors,rec.radio.amateur.homebrew,rec.radio.swap,sci.electronics.equipment,sci.electronics.repair

I have a Nonlinear Systems, Inc. Miniscope model number
MS-15. It is presently without trace and a couple of transistors getting
hot. I would appreciate any help. Copies or original OK. Let me know how
much.
Ron, AA5NI.......

4253. FS: Parts for Yeasu FT-101Z

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: servis_za_elektroniku@iname.com
Message-ID: <3934ff2c.112763589@news.eunet.yu>
Source record: 60258
Cross-posted to: rec.radio.amateur.equipment,rec.radio.amateur.homebrew,rec.radio.amateur.misc,rec.radio.swap

For sale parts for FT-101Z.

Ask what you need and make an offer. All parts are in good working conditions unless otherwise noted.

Buyer to pay S/H.

Send all inquires to: servis_za_elektroniku@iname.com

4254. Mini LCD Terminal ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Colin Lowe <colinlowe@jet.es>
Message-ID: <8h31t0hdt1@lola.ctv.es>
Source record: 60259

I am looking for plans to make a small mini RS232 terminal.

The idea is to make a packet cluster terminal for RX only. I need to input the RS232 data from a TNC's output direct to an LCD display interface, rather than into the serial port of my PC.

Any Ideas how this can be done?
PIC16F84 etc....

Colin Lowe

4255. Re: Mini LCD Terminal ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: JW <jdwalton@home.com>
Message-ID: <39353F66.849637E5@home.com>
Source record: 60260

If you don't want to get into assembler programming try the BasicStamp II from Parallax or the BX24 from Netmedia. There are newsgroups for both, they program rather easily right off the serial port of a pc and there are easy programs to use serial LCD displays, or to take serial, Dallas One Wire, etc input.

The BX24 was recently reviewed in Circuit Cellar.

Colin Lowe wrote:

> I am looking for plans to make a small mini RS232 terminal.
>
> The idea is to make a packet cluster terminal for RX only. I need to input
> the RS232 data from a TNC's output direct to an LCD display interface,
> rather than into the serial port of my PC.
>
> Any Ideas how this can be done?
> PIC16F84 etc....
>
> Colin Lowe

4256. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Brad Thompson <brad.thompson@valley.net>
Message-ID: <39352D47.DA3BC850@valley.net>
Source record: 60261

elaine.simons@cwcom.net wrote:

> Hi all,
> I'm new here, so don't flame me if I'm doing it wrong, but can any of
> you give me some advice as to how to build a really simple FM Rx.?
> I've looked on the net, but i can't find one that has less that 20
> componants. It doesn't need to have a huge range, and should be fairly
> small. Any help would be appreciated.

Hello--

Believe it or not, you can build an FM receiver with only one active device: the circuit
is called a "superregenerative detector". The active device (tube or transistor)
oscillates at two frequencies: the signal frequency (e.g., 88 to 108 MHz) and a lower
frequency called the "quench" frequency. Generally, the quench frequency is twice
the highest modulation component in the signal frequency (say, 40 to 100 KHz for FM
broadcast reception).

You can build the circuit with one active device (called a self-quenched detector) or
two (one device oscillates at the signal freqnency and the other at the quench frequency.

The quench frequency modulates the signal-frequency oscillations, suppressing
signal-frequency oscillations in one state and allowing the oscillator to fully oscillate another, second state. In between the two states, the signal-frequency
oscillator balances on the verge of oscillation, and incoming signals (or random
noise) pushes the circuit into oscillation.

Thus, the superregen is capable of large amounts of gain, but the signal-freqency
oscillation gets reradiated from the detector, making the circuit unpopular with
onther sensitive receivers using that portion of the radio spectrum. You can
add an RF amplifier stage, but then you're up to two or three active devices.

For more information, do a web search for the topic; also, look for
"fremodyne",
another 1940s variant. Also, look in older editions (say, pre-1970) of the
ARRL's
"Radio Amateur's Handbook".

BTW, go ahead and build a superregen-- it's an amazing little circuit.

73,
Brad AA1IP

4257. Hexter or Gudmunder

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Irv Finkleman <finkirv@cadvision.com>
Message-ID: <39354298.B113386A@cadvision.com>
Source record: 60262

Thanks for your reply re Small Loops, but when I attempted
to reply to you
I had my replies returned "user unknown"! Please send me
your e-mail address and
I will try again. I tried retxeh and hexter @blazenet.net
without success.

--
Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

4258. Re: Reworking an MFJ 1786 Loop Antenna

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Irv Finkleman <finkirv@cadvision.com>
Message-ID: <39354308.4EF8DAC9@cadvision.com>
Source record: 60263

Irv Finkleman wrote:

> I just picked up an MFJ-1786 Magnetic Loop Antenna. It had
> a few problems and had been tampered with. I have restored
> it to original condition and am just waiting for decent
> weather to put it outside. I have a few questions and would
> like to talk to anyone who has spent time with one of these
> antennas. Thanks in advance for any replies.
> --
> Irv Finkleman,
> Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
> Calgary, Alberta, Canada

Hexter or Gudmunder -- unable to reply to your e-mail -- my
replies to hexter@blazenet.net and retxeh@blazenet.net were both
returned as
"user unknown". Please send me your address and I will try
again.
Thanks...

--
Irv Finkleman,
Grampa/Ex-Navy/Old Fart/Ham Radio VE6BP
Calgary, Alberta, Canada

4259. Re: Simple FM recievers

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: arm@helix.nih.gov
Message-ID: <8h3kdk$qvh1@icet.net.nih.gov>
Source record: 60264

Brad Thompson (brad.thompson@valley.net) wrote:
:
:
: elaine.simons@cwcom.net wrote:
:
: > Hi all,
: > I'm new here, so don't flame me if I'm doing it wrong, but can any of
: > you give me some advice as to how to build a really simple FM Rx.?
: > I've looked on the net, but i can't find one that has less that 20
: > componants. It doesn't need to have a huge range, and should be fairly
: > small. Any help would be appreciated.
:
: Hello--
:
: Believe it or not, you can build an FM receiver with only one active
: device: the circuit
: is called a "superregenerative detector". The active device (tube or
: transistor)
: oscillates at two frequencies: the signal frequency (e.g., 88 to 108 MHz)
: and a lower
: frequency called the "quench" frequency. Generally, the quench frequency
: is twice
: the highest modulation component in the signal frequency (say, 40 to 100
: KHz for FM
: broadcast reception).
:

[snip]

Believe it or not, you can build an FM receiver with a crystal diode.

Andy Mitz (WA3LTJ)
Collector of FM only radios
www.somerset.net/arm/fm_only.html
arm@gnode.org

4260. Re: Mini LCD Terminal ???

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Allan Dobler <Allan.Dobler@crha-health.ab.ca>
Message-ID: <393555A7.75F7750A@crha-health.ab.ca>
Source record: 60265

Those old TRS-80 model 100 laptops make a great terminal. They have a terminal program in ROM. I have seen them for $10 at flea markets. PIC16F84's will set you back $5.

Of course, if you just want to build one anyway, for the learning aspect of it, go for it. The BASIC Stamp is a good starting point, as another writer has already stated.

Good luck,
Allan Dobler

Colin Lowe wrote:

> I am looking for plans to make a small mini RS232 terminal.
>
> The idea is to make a packet cluster terminal for RX only. I need to input
> the RS232 data from a TNC's output direct to an LCD display interface,
> rather than into the serial port of my PC.
>
> Any Ideas how this can be done?
> PIC16F84 etc....
>
> Colin Lowe

4261. Re: Multiple LED's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Rick Haub <rhaub@midwestmicro-tek.com>
Message-ID: <39355A6C.681A8378@midwestmicro-tek.com>
Source record: 60266

JW wrote:

> I am building a device with multiple (i.e. over 100, perhaps 180) T 1
> 3/4 LED's - red, blue and green ultrabrites and using PWM to control the
> intensity. Reading through Agilent's ap-notes I see that LED's in
> parallel is not recommended (i.e. each LED is recommended to have its
> own series resistor). How strictly should this discipline be followed -
> i.e. not paralleling any?

Well, it works like this, suppose you have a single LED rated for 20 ma and you use a 5v power supply, then you need a 250 ohm resister in series with the LED to ensure that you receives no more that 20 ma. This gives you 0.1 watts of power. Now if you parallel 2 resisters together the total current available is still 20 ma but if both are on then you only get 10 ma into each giving you 0.05 watts of power each. The LEDs will therefor not be as bright. however if only one is on at a given time then it will be as bright as the LED that has it's own resister and is not paralleled with any other LED.

I think you can see the problem here. You want to vary the intensity of the LEDs using PWM but unless you can take into consideration how many LEDs will be on or off in a given parallel circuit you cannot accurately determine the needed PWM period since the intensity is a function of available current.

Rick

4262. Re: Homebrew Linear Amp for HF

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Don W6JL <W6JL@ixpres.com>
Message-ID: <393568A2.E0C@ixpres.com>
Source record: 60267

Large, high-voltage switch-mode supplies are highly
> specialized items to design, and suitable transformer cores in
> particular are difficult to source in small quantities.
>
Ian OM,

Switchmode power supplies are "highly specialized" no more than any other current technology that is at least several years old. At least a couple of suitable ham radio designs have been published in the last ten years or so. A 2KW power supply Ferrite toroidal core, for example (use two at 100KHz) can be purchased in unit quantities from Amidon for under $12 each (FT-193A-F). There is nothing magical about switching power supplies. And very few hams need to custom design anything. I don't. If at all possible, I copy proven designs, and make departures from them that I am comfortable with (usually to save $$). Same as building a GaasFet preamp for 70cm, or a circuit with SMT components, a QRP rig, or anything else "new" to the constructor.

I do agree with you about FCC B certification. It does not match the needs of nearby weak-signal receivers (nor was it intended to); particularly if the receiving antenna is located close to the rig. But with antennas up in the air a ways and well away from the rig (where they belong), and using properly shielded or balanced feedlines, high-order harmonics from even non-FCC B compliant 250W supplies are inaudible, particularly on the higher HF bands, in my experience. Further, keep in mind that even if the switching supply were noisy, it can be shut down in milliseconds and disabled while receiving. This can be a very acceptable solution for many of us. So, there are ways...

All I am getting at is let's not put certain things in the "magical, impossible to do" category, just because they are not yet commonplace in homebrew or commercially manufactured ham radio equipment. The manufacturers' criterion is more complex than just technological, and includes marketing tradeoffs that can (very often, unfortunately) override technical ones.

73,

Don, W6JL

4263. fa: Book:"The Oscillator at Work" 1944 @$5.99 Last Call!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: rlucch2098@aol.com
Message-ID: <20000531170738.16780.00000847@ng-fk1.aol.com>
Source record: 60268

Noreserve, No bids Either :-), exc condx, w/pic, ends tonight>>
http://cgi.ebay.com/aw-cgi/eBayISAPI.dll?ViewItem&item=341188301
Thanks es 73..........RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

4264. Sorry, I posted the book in the wrong place!

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: rlucch2098@aol.com
Message-ID: <20000531171302.16780.00000851@ng-fk1.aol.com>
Source record: 60269

Sorry guys, please accept my apologies
Thanks es 73.....RICH-WA2RQY RLUCCH2098@aol.com
Web-Page URL> HTTP://members.aol.com/rlucch2098/index.html

4265. Re: Ham Radio Design Freeware

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: douglas dwyer <doug@ddwyer.demon.co.uk>
Message-ID: <qHkB3CADPWN5Ewwj@ddwyer.demon.co.uk>
Source record: 60270

In article <39342a4b.1802538@news.asacomp.com>, jyazel@asacomp.com
writes
>I could make a selection on the page, but couldn't get it to download.
>
> Any ideas?
>
> Jack
Worked for me and worth downloading.
--
douglas dwyer

4266. Re: Multiple LED's

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: X@Y.Z.net
Message-ID: <slrn8jb67s.a4o.X@animas.frontier.net>
Source record: 60271

>JW wrote:
>
> I am building a device with multiple (i.e. over 100, perhaps 180) T 1
> 3/4 LED's - red, blue and green ultrabrites and using PWM to control the
> intensity. Reading through Agilent's ap-notes I see that LED's in
> parallel is not recommended (i.e. each LED is recommended to have its
> own series resistor). How strictly should this discipline be followed -
> i.e. not paralleling any?

In 12VDC setups I've run multiple LEDs in series -- picking the
proper resistor to limit the current.
However, you might not want to do that for "...over 100, perhaps 180..."
If one fails in an 'open' (vs. a short) the whole thing goes dark.
And, you'd need to have a HV DC (albeit low current) suppy.

Jonesy W3DHJ

--
Marvin L Jones | jonz | W3DHJ | OS/2
Gunnison, Colorado | @ | Jonesy | linux __
7,703' -- 2,345m | frontier.net | DM68mn SK

4267. WTB NC-183 knob

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Brian Hill <jonnysocko@jps.net>
Message-ID: <qAhZ4.63$kJ3.10331@nntp3.onemain.com>
Source record: 60272

Its the small grey one. Thanks
73 Brian

P.S. Go to my sight and see some great receivers from the past.
Brian's Radio Universe
http://www.jps.net/jonnysocko

4268. Re: 6mtr Xvtr

Newsgroup: rec.radio.amateur.homebrew
Date: 2000-05-31 00:00:00 UTC
From: Dale Parfitt <GTE/parinc@GTE.net>
Message-ID: <3935A4F6.AD9E92A7@GTE.net>
Source record: 60273

ehsjr@bellatlantic.net wrote:

> The Ten-Tec 20m ==> 6m transverter is easily
> modifiable to 10M => 6m. I've done it. The
> Ten-Tec kit costs $95.00. You need one
> (or 2) xtals for 50-52 or 52-54. I used 2
> with diode switching. You need to change
> a few parts. The LO in the Ten-Tec kit is
> set for 36Mhz you change it to 22 and 24
> (your 10M signal is 28 or 29 MHZ;
> 22+28 = 50, 22+29 = 51, 24+28 = 52,
> 24+29 = 53) The parts you change, other
> than the xtal are to set the frequency
> of the L/C circuits in the LO. If you
> decide to build it, contact me and I'll
> give you the values I used. Ed
>
> Chris NG3F wrote:
>
> > looking for a 6meter transverter schematic for homebrewing.
> > using 10m in (have FM installed) to 6m out.
> >
> > tnx and 73's
> >
> > Chris NG3F

Hi Ed,

Have you looked at the spectral purity of the output? The reason T-T
chose 20M was because of the increased cost in filtering needed to keep
2X the LO (44-46 MHz) and 2X the IF (56 MHz) out of the output when
using a 10M IF. These freqs are very close in to Fout.

Dale W4OP